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ABSTRACT

The Occupational Competence Access Project (OCAP) was conducted to facilitate student access to (1) occupational opportunities through the provision of a guidance system incorporating student capabilities; (2) occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation; and (3) occupational employment and training opportunities through the development of a comprehensive articulation between curriculum levels, curriculum areas, and the world of work. Some of the project's major accomplishments were establishment of career information centers; development and implementation of career guidance philosophy and policies; development of industrially validated curriculum in vocational areas; establishment of career development components in several academic areas; and the establishment of a community resource system. Summative evaluation data were collected through a pre-posttest of all students at both project sites. The impact the project had on the schools was also determined through interviews and an examination of school policy formation. The project was found to have positively influenced the occupational awareness, career maturity, and decision making abilities of the student population and to have had a favorable influence on the school's personnel and policy directions. In addition, formative evaluation inputs were collected on an ongoing basis. (Several appendixes containing curriculum products, forms, and other related materials are included in a separate document, CE 018 431.) (BM)

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Final Report

Project No. 502A150002D

Grant No. G310-75-0010

Occupational Competence Access Project

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

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5. Summary of the Report

1. This report covers the time period of July 1, 1975 through June 30, 1978. During that time the Occupational Competence Access Project was conducted as the State of Massachusetts' Vocational Education Part D Demonstration Project. Grant #G310-75-0010.

2. Goals of the project:

   a. To facilitate student access to occupational opportunities through the provision of a guidance system, which incorporates student capabilities.

   b. To facilitate student access to occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation.

   c. To facilitate student access to occupational employment and training opportunities through the development of a comprehensive articulation between curriculum levels, curriculum areas, and the world of work.

3. Results - accomplishments:

   a. Established Career Information Centers.

   b. Developed new guidance roles.

   c. Developed and implemented career guidance philosophy and policies.

   d. Established student oriented guidance procedures.

   e. Documented student progress.

f. Conducted interest and ability inventories.

g. Developed industrially validated curriculum in vocational areas.

h. Established career development components in several academic areas.

i. Created structures to support ongoing curriculum development.

j. Developed examples of classroom activities including career development.

k. Developed mini course projects.

l. Established cross-disciplinary curriculum planning.

m. Created articulation between teachers and guidance counselors.

n. Developed community resource utilization schemes.

o. Encouraged articulation between vocational and academic teachers.

p. Established community resource system.

4. Evaluation:

The evaluation of OCAP was conducted at both summative and formative levels. Summative data were collected through a pre-post test of all students at both sites. The impact which the project had on the schools was also determined through interviews, and an examination of school policy information. The project was found to have positively influenced the occupational awareness, career maturity, and decision making abilities of the student population. Further, the project had a favorable influence on the school's personnel and policy directions.

Formative inputs were collected on an ongoing basis throughout the project via critical incident reports, and several focused substudies conducted by the evaluators. These inputs assisted the project management in making mid-course corrections, and managing the accomplishments under the grant.

5. Conclusions and recommendations:

   a. The OCAP model is a comprehensive approach for infusing the benefits of occupational education throughout the entire school curriculum. The components roles and procedures of this model are sufficiently documented to support its replication in other sites. It should be considered as a methodological resource to any person interested in improving the occupational dimension of the school program.

   b. The project has been conducted utilizing an external change agent model. This approach holds many cost effective benefits for school systems initiating innovations. Therefore, the process of this project is useful to other researchers and educators attempting similar projects.

   c. The experiences of the OCAP staff have been documented, and serve as benchmarks for others who will conduct demonstration projects. This project was successful, but like all projects faced a multitude of problems and issues. Analysis of these provides others with preventive information, which will improve their projects.

Section 6

a. Accomplishments

Introduction

The purpose of this project (#502A150002D), funded under Part D of the Vocational Education Act, as amended in 1972, was to demonstrate an improved capability for schools to provide access to occupational opportunities through a systematic cluster oriented career education process. The three year effort has been in pursuit of the following goals to accomplish that purpose.

1. To facilitate student access to occupational opportunities through the provision of a guidance system which incorporates student capabilities.
2. To facilitate student access to occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation.
3. To facilitate student access to occupational employment and training opportunities through the development of a comprehensive articulation between curriculum levels, curriculum areas, and the world of work.

The project was conducted in the suburban rural site of King Philip Regional Schools in Wrentham, Massachusetts, and the urban industrial site of Lynn Public Schools in Lynn, Massachusetts. These sites were chosen because they represented two diverse socio-economic environments, which would

provide the opportunity to demonstrate the OCAP model in systems representative of a greater population of schools throughout the country.

The approach used in the project was an external change model in which the central staff of the project operated as an independent third party to both districts. The model proved to be not only effective, but also reduce to a minimal level the costs to the schools in continuing the project beyond the funding period. Today they are recognizing the benefits of this approach by comparison to other projects that have built dependencies and staff that are essential to continuance, which the school district must assume in order to maintain the project. Fortunately, in Lynn and King Philip, the mission stated here will be carried on by existing staff and a affordable level of resources.

The strategy of the project has been to build a tangible success model within each school site, and expand that into the entire fabric of the school and other schools' curricula. A commitment was made in the beginning that the project would accomplish certain specific things in the district, which would have a low assumption cost at the end of funding. Moreover, the basic underlying strategy was to move in with a conceptual model of a career/cluster program, (Figure 1) and modify it vis a vis the perceived needs and capabilities of the system. Consequently there have been adjustments in the ways the project accomplished its goals. These reflect positive reactions to reality while keeping the

MODEL FOR INCREASED ACCESS TO BENEFITS OF VOCATIONAL EDUCATION

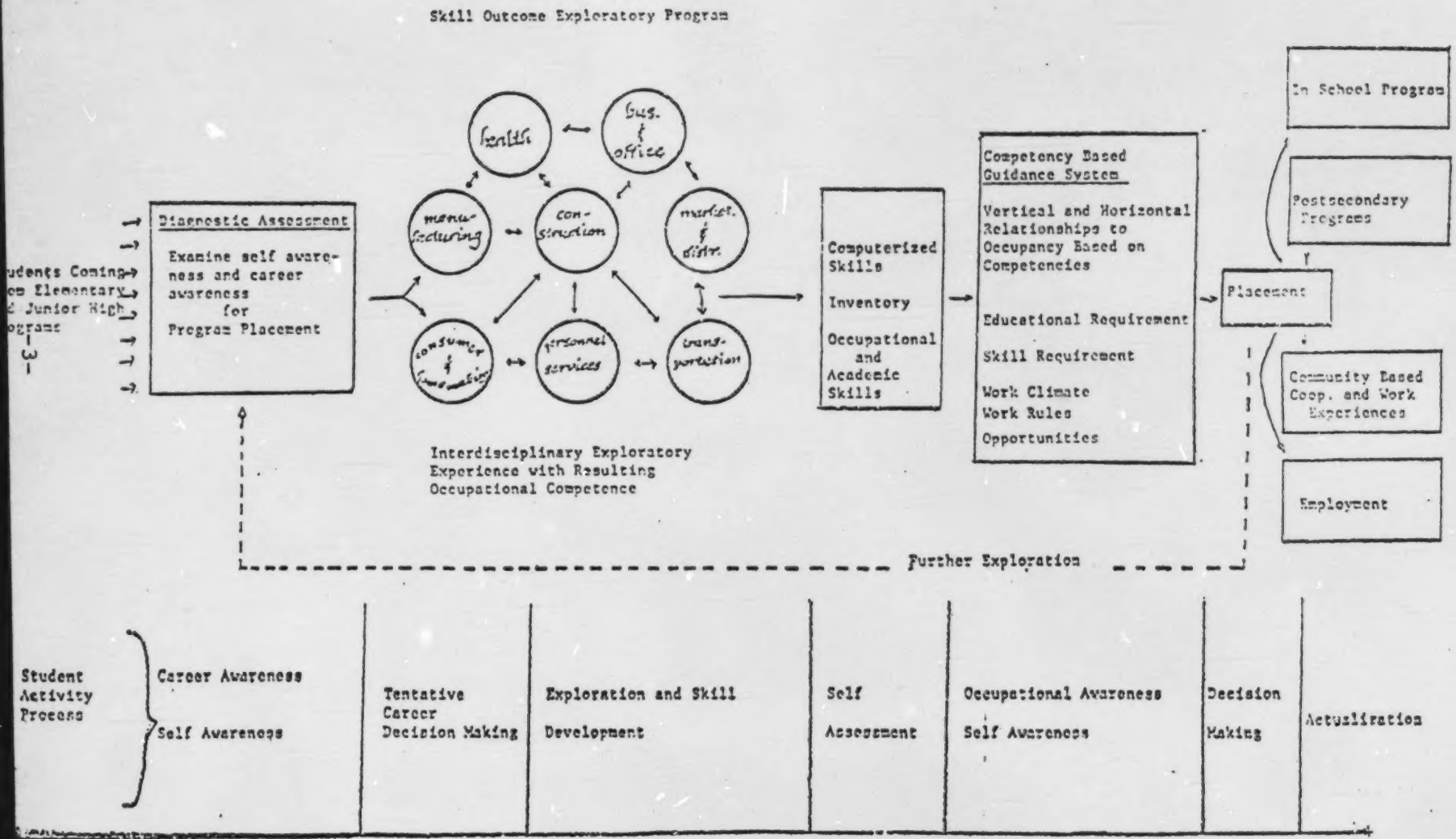


Figure 1.

project on course. In the final analysis, our goals have been met, there is a significant impact on both demonstration sites and the OCAP model is documented to the point that it could easily be replicated.

Proof of the preceding statement rests on the accomplishments which the Occupational Competence Access Project claims with regard to each of the three project goals Therefore, this section of the report is written in a manner that will facilitate that linkage. First the accomplishments are organized and reported according to the goals of the project. They are presented in chronological order so the reader may get a sense of development. The accomplishments describe outcomes along with significant findings that we, as a project staff, want to share with those who would conduct similar activities. The style of this entire report is to provide a concise narrative description of the project, therefore, in the accomplishments section everything described is also referenced to an appended product or example of the accomplishment.

Accomplishments

Goal I: To facilitate student access to occupational opportunities through the provision of a guidance system, which incorporates student capabilities.

An initial assessment of the two school sites revealed that the guidance systems were information poor, relative to career/vocational materials. The OCAP model required that a

wealth of information be made available to students for the purpose of gaining knowledge about the world of work, about themselves, and making career decisions based on facts rather than fantasy. A systematic review of resource materials was put into motion in which project staff searched for and evaluated many career resources. The major criteria of the search was to obtain maximum quality while maintaining the lowest cost for materials. Further, the materials represented various clusters of occupations. The result of this effort was the compilation of career resources, which have effectively accomplished making both sites resource rich without having to incur a great deal of cost. The resources were catalogued (Appendix A), and added to, during each year of the project.

Teachers and counselors were introduced to the resources through inservice courses, workshops, and assistance on the job. They further evaluated the resources as they used them, and have contributed greatly specifying a body of knowledge useful in any career education program. One outcome of this refinement is contained in the Career Information Center Manual (Appendix B), describing a CIC started on a minimal budget ($500.00), using the contained resource list, and maintained with an emphasis on appropriate scope and depth necessary to conduct a student oriented approach.

An important accomplishment in operationalizing the OCAP model has been the planning and development of a system

which will accommodate student needs as they develop. The hub of that system is the Career Information Center (CIC), which functions as both the communication and resource point for the system. Unlike many career information centers, the focus has been on people and not the facility. Consequently, our centers are located in high traffic areas, in some cases, sacrificing space and other facility considerations. Counselors use the CIC as a counseling tool, and teachers bring their classes in for career oriented assignments. All staff use the professional resources for planning and development activities.

The students coming into the CIC find that the process starts with their interests and knowledge about themselves and the world around them. They quickly realize that they regulate the things they learn there, and the pace at which they proceed. The environment is one in which the student is challenged to investigate, to discover, and make decisions. Help is provided by counselors, teachers, and/or a center aide. Many students really caught on to this autonomous self directed method of learning. Some became helpers of others in the process, which added a peer to peer dimension to the center.

The Career Information Center design is described in Appendix B, (CIC - What it is and How to do it). It has played an important part in this project since it is the first and most tangible change recognized in the pilot sites by the school staff and students. It provided an entry

point for the project staff to penetrate the school in a meaningful way, and a base of operations which got immediately down to the student level. In other words, the CIC was the first manifestation of the strategy to build a tangible success model in OCAP.

The career development philosophy utilized in OCAP is that career decisions are based on an integration of career awareness and self awareness, and that career guidance assists individuals to become more proficient at gathering and evaluating these types of information, and making increasingly more defensible decisions about their lives. One requirement of such a scheme is the problem of gaining and providing information about the student to the student. There are many interest inventories and attitude scales available, and it is often difficult to determine the appropriateness of one versus another. An accomplishment of OCAP has been a systematic investigation of several interest inventories (Appendix C), and some experience and recommendations based on our utilization of various information gathering instruments in the project.

The Harrington/O'Shea CDM system was originally used to help students determine logical starting places for investigating careers. The twenty-three page printout and attendant turn-around time presented problems in the instrument's use. The process and data, however, were considered very useful. An improvement on that system, called System S, which is self scoring, has resolved some earlier problems. Other data

collection systems were used in the third party evaluation of the project to gather student gain information. They were: Deciding CEEB, CMI, McGraw-Hill and the Massachusetts Occupational Knowledge Assessment Test. Complete instruments were used during the first year; however, during subsequent years they were reduced to components for the purpose of restricting the time needed to administer them.

The project staff has been satisfied with the above instruments as tools to capture the often elusive benefits of career education. More importantly, however, the information rendered is essential to a student-centered guidance system. If the student has more facts about his/her interests, motives, values, and needs, they can carry on much more meaningful exploration of occupations and develop more realistic alternatives for their futures.

Documentation of student activities and accomplishments was an issue addressed in this project. During the first project year the evaluation pointed out that there were obviously things happening in the project that needed to be documented if an orderly, disseminatable system was to result. This problem of documentation exists in many career guidance systems which we investigated in pursuing a solution to our problem. Therefore, the student file system (Appendix D) which has met the needs of this project, should be of assistance to many others.

Improving student access to occupational opportunities demands, at the operational level, required a specified series

of activities, which when followed, take a student through a developmental process leading to more informed choices. Such a process activated in the "Careers and Me" series (Appendix E), developed and implemented in the OCAP project, primarily through the efforts of Mr. Richard S. Benner, guidance coordinator for the OCAP staff. The series simplifies the career development process, is easily administered, and provides the necessary jumping off point for students to use other occupational information tools. "Careers and Me" has been used by counselors and teachers, and is a central process in the Career Information Center. The documents become a process monitoring device as the student completes activities in areas such as values, abilities/interests. The career match quickly helps the student arrive at a number of occupations viable for exploration at a given time of interest and self description. The activities facilitate planning, helping the student move into further development and communicateing his/her plan to counselors and teachers.

The process, as a whole, is a model for students to follow in their own pursuits of career development. It is a simple base to work from, however, it includes the essential ingredients for sound career planning. Additional supplemental materials may be used in areas where the student is having difficulty such as values clarification. What has been accomplished here is a practical, systematic answer to an important problem in career development.

All of the previously cited accomplishments deal with a focus on the career guidance system itself. Two very significant contributions which OCAP has made have been the development and testing of specific roles for a Career Information Center aide (Appendix F), and for a counselor (Appendix G). Their significance rests in the fact that any system of guidance, no matter how well designed and organized, requires people to implement it successfully. The role statements included in this report have been developed within the context of our project objectives, contributed to by the persons acting in these capacities, and tried for three years in nine schools in the project. They have also been adopted by other districts as a result of workshops and dissemination efforts of the staff.

The Career Information Center aide position goes beyond simply keeping shelves stocked in a Center. The responsibilities cast the person in a process-helper capacity, to assist students in their exploration. Other facilitation and documentation duties provide counselors with assistance, allowing them more time for professional activities. The aide position has become an integral and essential role in the execution of the model.

The counselor's role has added dimensions of community liaison, planning, group counseling, and in-house consultant. The most important message that this role description carries is that career guidance happens throughout the school, in classrooms and other locations, not just in the counselor's

office on a one to one basis. Implementation of that role has been a slow process, however, there are definite signs that the counseling staff at both sites are assuming more leadership responsibility, assisting teachers, and using group techniques.

A key issue in whether or not innovations like the guidance component of OCAP are going to last are the policy statements by which the guidance department will operate. In the first year of OCAP activities, policy discussions were undertaken to lay the necessary groundwork for the departments to assess their operations relative to career education. By the end of the first project year, it was appropriate to develop a model paper in King Philip (Appendix H).

The second and third years of the project have been addressed to making inroads toward policies in both sites which incorporate the OCAP career guidance component. As the project draws to a close there are several signs that this effort is having an impact: (1) King Philip director of Guidance will have 7-12 jurisdiction as of July 1, 1978; (2) all 9th graders at King Philip receive an orientation to the CIC from their respective counselors; (3) Lynn counselors serve as team leaders in each secondary school providing career education leadership; (4) counselors at both schools are making efforts to reduce sex stereotyping in student course selection and career choice.

Policy change and innovation is a long process, longer than any three year demonstration grant. We have, however,

improved the climate for change and expect that the school sites will continue to make career development and integral part of the guidance functic.

The latter part of the second year, and the third year of the project have been devoted to expanding the guidance system to all secondary schools in Lynn and King Philip. CIC's now exist in all junior and senior high schools of both sites (listed in Appendix I). Communications between the schools and between the system and the community has increased. To be sure there is a great deal of variability in the functioning of individual counselors. There is, however, a noticeable increase in career information dissemination, group counseling, and planning activities conducted by the counseling staffs in both schools.

Earlier the external change agent model was mentioned as the approach used to implement this project. A critical aspect of that type of model is the institutionalization, or turning over of responsibility and ownership to the system being acted upon. The OCAP staff made a conscious effort in the third project year to see that take place. At King Philip, a Career Education Committee has been established to guide the development of career education; the CIC will be staffed by a CETA person who has received training by OCAP; curriculum plans have been written which include guidance activities in the academic classroom; and the Superintendent has issued policy directives supporting career guidance.

In Lynn, guidance team leaders have been appointed in each secondary school. These staff will maintain leadership responsibility for continuance of career education activities started by the Occupational Competence Access Project. During the 1977-1978 school year there was an across-the-board curriculum revision activity initiated. Career guidance and development is being written into all curriculum planning at Lynn, which will insure continued development of the concepts developed in OCAP. Plans to budget the ongoing maintenance of the CIC's is also in place.

Goal II: To facilitate student access to occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation.

The OCAP project began with an industrially validated data base approach, developed in a previous project (CAREER). The primary targets of that approach were the teachers of occupational and vocational subject areas, i.e. business, distributive education, home economics, and the trade and industrial shops. The inservice activities required teachers to detail their lesson planning in terms referenced to the performance objective data base. An example of this process in Appendix J, shows the curriculum statements and Project CAREER performance objective identification numbers. The net effect of this aspect got teachers to relate classroom activities to actual performance needed in the working world.

The teachers had problems with such a specific and narrowly focused approach to curriculum development. There were, however, examples of successful accomplishments of the approach, such as Mr. William Moore's (Related Metals) slotted units in Appendix K. This complete course in related machine metals was written and implemented in OCAP. The majority of the teachers had trouble reaching that level of curriculum sophistication, and, in fact, rejected the strict competency based philosophy. Therefore, the project adjusted its approach to meet the teaching staff on a more common ground - namely, a more generalized student centered approach to the curriculum, related first to their course content, then to the world of work.

From this point in the first year, supporting of articulated curriculum in the academic departments was addressed. Examples of how that might be accomplished were prepared during the summer of the second project year (Appendix L), An intensified effort to prepare all teachers for the inclusion of occupational information in their work was embarked upon in the second school year. At King Philip, the major thrust was toward the department chairperson level, and in Lynn toward the city-wide curriculum coordinators. Additionally inservice courses were given to help teachers understand the concepts of career education, deal with occupational resources, and practice strategies for infusing a student oriented, cluster based curriculum approach (Appendix M). The outcome of this activity was that the staffs of both

sites began to be oriented toward the curriculum goal of OCAP.

Emphasis shifted in the sites during the second year from isolated examples of successful curriculum implementation along OCAP lines to an emphasis on broad based curriculum planning, which would impact on the whole school. Details of this emphasis are evident in the operational goals and objectives developed for each site for the second project year (Appendix N). These plans also exemplify the shift in OCAP's central staff roles from doers to facilitators. Much of the work responsibility for the school site personnel in designing and implementing curriculum is evident.

The year's activities in Lynn led to the inclusion of career education in the curriculum revision set into motion by Mr. Edward Jahns, the new Deputy Superintendent for Secondary Education. In King Philip it led to a curriculum writing summer workshop sponsored by OCAP in which selected department chairpersons developed the Curriculum Planning Notebook (Appendix O), a guide to the implementation of career education in the school.

Additionally, there were mini courses developed for implementation during the third project year (Appendix P), which would pave the way for other teachers to become involved within the cluster based occupational dimension of the curriculum. These were proposed by members of the school site staff, funded by OCAP, and implemented during the third project year.

The final year of the project included the implementation of curriculum plans at King Philip and the development of curriculum planning activities in Lynn on a city-wide basis. In King Philip the student oriented cluster based approach has been practiced approximately 40% of the time and there are plans for expanding those activities. In Lynn there are isolated activities in the OCAP curriculum approach in all secondary schools, however, the major thrust of the city-wide curriculum revision will not be felt until the 1978-1979 school year.

What has been accomplished is an organized systematic approach in both sites, which accommodate teacher readiness and the organizational size and structure peculiar to each system. The process of infusion of student centered cluster based occupatioonal curriculum is a long and dynamic one with many variables. The beginning signs of meaningful curriculum change at both sites are that the administration has given support in terms of directions and planning activities, the teaching staffs have been oriented toward the approach, and there are examples of changes in many areas of the schools. This process will continue and ultimately have the greatest impact relative to OCAP's mission.

Goal III: To facilitate student access to occupational employment and training opportunities through the development of a comprehensive articulation between curriculum levels and the world of work.

The process of articulation became an important aspect of the Occupational Competence Access Project since it was the major focus of this goal to coordinate the linkages necessary within the schools and with the communities surrounding the schools for the purpose of managing the benefits and interrelationships developed in the project. Initially this articulation was delayed due to the magnitude of the task, the readiness of the school staffs, and the develpoment of substance in the curriculum and guidance components. Years two and three of the project have been characterized by increased attention to this goal, which has taken on several interesting dimensions.

Articulation between teacher and counselor activities has been fostered through activities in the Career Information Center (Appendix G). They work together in a helping relationship to students, relative to introducing occupational information, systematic decision making, and ongoing self awareness. Counselors have entered classrooms and presented information on careers related to the subject matter. Teachers work with counselors in the CIC in student group activities. Two examples of the crossing of boundaries are the procedures paper written by the King Philip guidance department, and the career information course developed at Lynn English (Appendix Q).

A second internal articulation issue, particularly at King Philip, was between vocational and academic teachers.

Since OCAP began, several positive steps have been taken for these groups to interface. The vocational director's office was moved to the "academic side of the house," occupational courses for non-vocational students have been initiated, vocational and academic staff serve on the Career Education Committee, and many academic teachers have been certified to teach vocational related subjects. These events have led to greater harmony in the faculty, more options for a greater variety of students, and a sharing of resources within the school.

Articulation between the junior and senior high schools at both sites has been a primary focus of OCAP. CIC's were established in all secondary schools in Lynn and King Philip at the beginning of the third project year as the beginning of a coordinated 7 through 12 career development process. Team leaders in the Lynn schools met regularly to plan, cooperate, and assist each other in the activities promoted through OCAP. The Guidance Director at King Philip has been given 7 through 12 responsibilities and it is anticipated that the department chairpersons will assume 7 through 12 coordination responsibilities in 1979. These accomplishments add up to an articulated process of career education which assists students through awareness, exploration and implementation activities in a systematic way for seventh through twelfth grade, regardless of the fact that they are in different schools.

Articulating with the respective communities has taken on a community resource dimension in OCAP. The effective

management of community resources requires extensive planning and coordination, particularly in an urban community such as Lynn. The OCAP staff developed a planning model which was implemented over the course of the project in both sites. The Community Resource Planning Notebook (Appendix R) outlines the process criteria and dimensions of that system.

In Lynn there has been increased activity in the area of community involvement in the school program, particularly relative to the occupational dimension of the school's function. A steering committee was initiated in OCAP, which facilitates the cooperation of business and industry. Field trips, guest speakers, and team sharing of resources (publications, equipment, etc.) have been evident in the past two years. An outgrowth of the community resource emphasis has been an annual "career night," developed at English High School by Mr. Alan Tattle with the assistance of OCAP staff.

At King Philip there was an assessment of community resources conducted by OCAP staff in the second project year. This provided a data base for the development and utilization of a community resource system tailored to the suburban-rural communities surrounding the regional school. (Examples of the resources made available to the school are in Appendix S.) In year three of the project there has been an increase in the number of community participants that have contributed to career education in the school. These efforts are coordinated through the Career Information Center.

The community resource management system developed in OCAP provides the necessary coordination structures in both sites to enable the use of community resources to be an ongoing, self renewing activity. The process has built in ways of generating new resources, minimizing overlap and coordinating the effective use of the various people involved. There have been procedures written for using speakers, taking field trips, and organizing resources which help increase the benefit to students involved in the program. Roles have been delineated and the personnel have had at least a year of practice in making the system work. Therefore, we are confident that articulation with the respective communities in Lynn and King Philip will be an ongoing and productive activity.

Other Accomplishments

Beyond the stated goals of the project there are several accomplishments which are noteworthy in that they relate to national issues in vocational education. They are presented briefly here for the purpose of emphasizing that overall perspective.

An emerging issue, which has been addressed in this project, has been women's roles in a changing work society, and their impact on vocational education. During OCAP it became clear that there are increments in the development of attitudes of persons working toward a non-stereotypic point of view. These may be characterized from our experience in the demonstration sites. At first the site staffs and project staff regarded the issue of equal education for women in vocational education as "not our problem." An issue raised by

federal evaluators of the project made sex bias and stereotyping our problem. The systems reacted to a compliance level, however, our own self evaluation left us unsatisfied with "providing opportunities." We became aware that the problem is pervasive and requires pro-action to make progress toward equality. Today the school sites are making a conscious and active effort to recruit young women into non-stereotypic vocational programming. They are conscious of and make students aware of aspects of bias that exist in occupations and occupational information. They are helping students break down barriers to what they can be. We are pleased with the progress we have helped to introduce in this regard.

There has been an impact on the two school organizations relative to the way the systems operate which has resulted from OCAP's intervention. There has been an increased emphasis on planning at all levels of the administrative and teaching staffs. Additionally, the participants have developed a process of ongoing evaluation of these efforts related to more specific and clearer objectives. These activities will help the systems to be more responsive to student needs in other areas in addition to the occupational dimensions represented in OCAP.

The OCAP project has attempted to improve the evaluation of demonstration projects by taking a comprehensive approach, advancing documentation techniques in pursuing the elusive benefits associated with career development.

The evaluation section of this report outlines these efforts. Although we were not completely successful in organizing a complete model for evaluation, there are a number of components, considerations and results that should be helpful to other similar projects.

The Occupational Competence Access Project has contributed to the furtherance of the concept of vocational education. Utilizing a cluster oriented strategy, and an emphasis on the student, we have been able to break down the benefits of vocational information and preparation to a point where it may be observed in many aspects of the school endeavor. Progress has been made in relating guidance roles to vocational student goals. Greater options have become a part of vocational programming in the demonstration sites, and there has been an increased utilization of community resources. All of these things have a broadening effect on the role vocational education plays in our schools.

Finally, the OCAP experience has been a demonstration of the influence of school systems through an external change agent strategy. This model has many benefits in this time of austerity, since the basic philosophy is to impact the system without requiring it to absorb great additional costs. The operational objective roles and activities performed to create the accomplishments presented here are useful models of activities that could be used in other demonstration projects.

b. Major Activities and Events

The general project design of the Occupational Competence Access Project encompassed three broad goals. Each of these goals was broken down into a series of objectives and specific activities over the three years of operation (Appendix T).

The first goal involved the development and implementation of a comprehensive guidance system. Essentially, this system assisted students in clarifying and linking their individual interests and abilities with occupational possibilities.

The second goal concerned the development and pilot testing of instructional programs, which relate academic content to occupational possibilities through career exploratory activities. This system utilized a cluster-based approach for the organization of resources and the management of activities.

The third goal involved the establishment of an articulation system, which linked programs within the schools and in turn linked those programs to the world of work. This system included the other schools within the demonstration site systems.

Additionally an overall management and evaluation goal entailed a specific project plan, and a formative and summative evaluation design. This goal provided the operational framework for the project as well as a source for management information.

In order to operationalize these goals, the OCAP staff adopted the Research, Development and Diffusion Change Model (Havelock, 1969), utilizing an external agent strategy. The model, of necessity, was modified in order to be compatible with the requirements of a demonstration project. These modifications occurred primarily at the Research phase, which was interpreted by OCAP as action research rather than basic research. This resulted in the two demonstration sites becoming career education activity laboratories for promising and innovative practices.

The Development phase of the model essentially became a period for expansion of successful practices, from the action research phase, throughout the site school systems. The Diffusion phase involved the institutionalization of the OCAP model within the site systems, and the dissemination of successful practices to other school systems.

Prior to the implementation of the project goals delineated above, OCAP conducted an extensive needs assessment of both sites (Appendix U). The results of the needs assessment indicated that the Wrentham site was at a more advanced stage, in relation to the implementation of career education, and was, therefore, more compatible with the goals of the OCAP.

In planning for the first year of project activity, the OCAP staff utilized a differentiated staffing approach in order to capitalize upon project staff expertise and to maximize site staff development. As a result, each project

staff member was responsible for one of three identified program areas - administration, guidance, or instruction at both sites.

At the Wrentham site, the staff participated in five days of orientation to the OCAP model and the anticipated activities of the first year (Appendix V). These sessions occurred prior to the official opening of the school year with the participants being compensated. During the school year the three identified site staff groups - administration, guidance, and instruction - were separated into in-service training programs geared to their identified needs. The incentive system utilized included academic course credits, through Fitchburg State College.

The Wrentham guidance staff met in a series of workshop sessions, which culminated in a written plan of action (Appendix W). The instructional staff was subdivided into academic and vocational groups, with each in-service session resulting in the development and implementation of career education instructional packages (Appendix K). The administrative staff met periodically to discuss methods of communication and project management.

The Lynn site staff participated, at the beginning of the first year, in an intensive OCAP orientation workshop. (See Appendix X.) However, the Lynn group was composed of city-wide participants, while the first year plan called for the involvement of only one school. The rest of the first

year inservice training format was similar to that of Wrentham.

During the project planning for the second school year several modifications were made. The major change was a realignment of the project staff. This resulted in the designation of one project staff member to serve as the coordinator of each site with responsibility for all site project activities. The purpose of this change was to maximize the results of the first year inservice program through centralized coordination. Additionally, it would lessen the perceived confusion of the site staff resulting from the first year project staffing pattern.

At the Wrentham site the credit course approach to inservice training was continued through the summer (Appendix Y). However, in the fall, the emphasis was changed to the middle manager, or department chairperson level. This group was designated by the Superintendent of Schools as the school's Career Education Steering Committee (Appendix Z). During the course of the school year, inservice was provided by the OCAP staff, with planning assistance from the chairpersons at the individual department level.

At the Lynn site the credit course approach was utilized with city-wide participation (Appendix a). This was supplemented with a series of sessions for city-wide administrators and building principals. City-wide leadership was identified at the building level, and the Deputy Superintendent designated one member of each city school as OCAP linker (Appendix

b). This group constituted a planning and advisory group and met monthly during the course of the school year.

At the end of the second project year the OCAP staff was again realigned necessitated by the departure of one site coordinator and one CIC coordinator. As a result, during the third year the two sites were managed by one site coordinator and one CIC aide.

During the summer preceding the final project year, the Wrentham site staff made significant progress toward institutionalizing the OCAP model through three activities. First, several innovative career education curriculum packages were developed with the support of OCAP for implementation during the school year (Appendix c). Second, the Career Education Steering Committee participated in a two week workshop, which resulted in the King Philip/OCAP Career Education Planning Notebook (Appendix O). The notebook is a comprehensive plan for implementing career education at the ninth grade level. The third significant activity was the development and dissemination of a statement of support for career education by the Superintendent to the entire site staff (Appendix d). During the third year the project emphasis was upon the pilot testing of the career education plan, and the internal assumption of responsibility for the implementation by the site staff.

At the Lynn site the Linker system of the prior year was continued with the linkers being designated as team leaders. The team leaders were responsible to the Deputy

Superintendent for career education activities within their buildings, for supervision of the CIC aide, and for the formation of a school level career education team. An intensive management training program was implemented by the OCAP staff for the team leaders to assist them with their expanded roles (Appendix e).

Throughout the three years of the project an ongoing effort was made to share problems and successes with other projects. This was particularly true in regard to the other demonstration projects within Region One. The results of this ongoing effort was a series of Regional Workshops (Appendix f), a teacher exchange program (Appendix g), and participation in a major evaluation conference focusing upon demonstration projects (Appendix h).

c. Problems

Any project intending to demonstrate an innovation in education faces a myriad of problems. In fact, a major rationale for funding such projects is so that persons with expertise and motivation can attend to the problems which separate conception from accomplishment. Therefore, this entire report deals with some level of problem solving. This section, however, is an attempt to isolate problems which were not resolved by the project, and which inhibited OCAP's development and potential.

1. The Occupational Competence Access Project was granted to the State Department of Education,

Division of Occupational Education, which subgranted the project to a local education agency, which subcontracted to the project staff. This arrangement meant that the time lapse between requests for cash advances and the delivery of monies to the project took 8 to 12 weeks instead of the usual two to three expected if the funding had been direct to the project staff. It created serious cash flow problems for the project, put the LEA in the position of providing monies from its own funds, required a double bookkeeping system, and used up inordinate amounts of the project director's time to attend to the problems constantly arising from these factors.

Several attempts by the Project Director to correct this circumstance failed, due to a reluctance on the part of State administrators to move in that direction and Federal resistance to changing the grantee. In other words, once this system was cast we were locked in to its attendant processes, time delays, and duplicated efforts.

It is strongly recommended that this type of funding procedure not be used again, due to its inefficiency and to the inaccuracies inherent in a multi-layer management structure. Wherever possible project staffs doing the work should be

funded directly, and be responsible for the fiscal as well as programmatic aspects of the grant.

2. One of the major problems encountered at both sites during the initial project inservice effort, was lack of teacher acceptance of competency based instruction. This proved to be critical, due to the importance of the approach to the computerized systems nature of the project. Without the utilization of competency based, student progress, reporting systems, the project was unable to achieve the degree of sophistication in individualized student tracking hoped for. As a result, the project staff was able to successfully develop pilot efforts only with cooperating teachers, and had to utilize less desirable manual methods for developing student skill inventories for the majority of students involved in the project.

   As such, it is recommended that any future projects for which a large degree of success is contingent upon a particular instructional strategy, thoroughly investigate teacher attitudes toward such an approach prior to project implementation. It is also advisable to have alternative strategies planned in case of high teacher resistance.

3. Later in the project, when the OCAP model seemed to be at the point of institutionalization, another

major problem occurred. That is, key site staff participants in decision making positions changed. This resulted in a loss of project momentum and continuity due to the need to orient successors to the OCAP model. In addition, particularly in the case of the Lynn site, dynamic and innovative personnel were replaced with people who were not as receptive to career education and therefore not as supportive of the project.

In order to cope with this problem, which occurs in all school systems, projects should anticipate, and try to develop agreements, policies, etc., accepted by site staff as widely based as possible. This would involve as many people as practical, from the top down, in the project in order to minimize confusion when site staff undergoes changes in personnel.

4. This project had an exceptionally good evaluation in terms of the comprehensiveness of the data collection and analysis. Few demonstration projects have gone as far as this one in attempting to document student gain, system impact, and other focused improvements in the school environment. The project, however, fell short of its goal to make a submission to the Joint Dissemination Review Panel of the USOE-NIE because the evaluation design emerged

during the project instead of being firmly in place from beginning to end.

The project staff and evaluators worked on improving documentation and instrumentation throughout the project, which left us with fragmented assessment of student gain over varying periods of time in the project without the benefit of a comparison group. If the evaluation design had been fixed in the beginning of the three year project, with adequate pre-testing in September of 1974, the post-testing in April or May of 1978, we feel confident that significant gains could be recorded, which would make sense as a claim of success. As it turned out, some significant gains were recorded in years two and three, however, they were too disjointed to render any implications attributable solely to OCAP.

The recommendation, therefore, to any other demonstration project is to establish a goal of substantiating claims on student gains in the beginning of the project. Plan thoroughly with the evaluators the entire evaluation design before the project starts, and stick to the plan throughout the project.

d. Publicity

Publicity throughout the three years of the project included several articles in area newspapers describing

the activities of the project staff at both sites as well as several newsletters informing faculty members of the services provided by the Career Information Center, future plans of OCAP, and OCAP accomplishments to date.

Three newsletters were sent out to area school systems describing the OCAP project, accomplishments and future plans. (See Appendix i.)

1. November 1975 Newsletter: An explanation of OCAP-UPDATE Newsletter describing OCAP and the purpose of the project.
2. May 1976 - OCAP-UPDATE - A Student's Perspective: These were addressed to the high school students. The newsletter brought up questions such as, "How does OCAP affect an individual student? What skills and interests do I share? How can I explore career fields that will match my assets? What OCAP activities would help a student make better career plans?"
3. UPDATE Newsletter - December 1976: This was sent to all faculty members. Featured in the newsletter were student aides, their duties, and responsibilities. OCAP goals and accomplishments and courses offered at both sites were discussed.

The following is a list of news releases. (See Appendix j.)

1. Career Education Program at Lynn English High School, Lynn, Massachusetts: This news brief was

in one of the area newspapers. Activities and faculty involvement was described.

2. Article in King Philip School Newspaper: "Career Information Center Located in the Library." Description of the Career Center, resources available, and services.

3. Daily Evening Item: Local Lynn newspaper described the OCAP project's involvement at Lynn English High School.

4. News Article in the Attleboro Sun Chronicle: This article described the career education program and the King Philip vocational program.

5. News Article in the Attleboro Sun Chronicle This article described the OCAP program and the services of the Career Information Center.

6. News Article in a Local Lynn Newspaper: A description of the activities of the Lynn English Career Information Center. Several students were interviewed, and all found the Career Center and the OCAP project to be most helpful in career awareness and decision making.

The following is a list of project site activities summaries distributed to all members of the faculty.

1. Introduction to OCAP: A brief description of OCAP accomplishments, future plans, and where to find more information about OCAP.

2. OCAP, Then and Now: Summary of the accomplishments of the first year of the project and the plans for the second year.

3. Memo Sent to All Secondary School Principals in the Lynn School System: The activities of OCAP at Lynn English are described and suggestions are made as to ways in which OCAP can help other schools within the system expand their career education programs.

Visitations

Many career education programs have been developed in recent years. The Career Information Center has been an important component for these programs. Therefore, both sites have had many visitors. An orientation to the centers was given, suggestions of activities and publicity for the centers, and pitfalls to avoid when starting a career center.

The following visitors have been to either the King Philip Center or the center at Lynn:

King Philip

November 1976 - Graduate class, "History and Philosophy of Vocational Education," from Fitchburg State College

March 1977 - William Henry, Guidance Director, and Miss Carol Cotter, Guidance Counselor

March 1977 - Michael Freshwater, Liverpool, England

May 1977 - Counselors from Norton High School interested in developing a Career Information Center

July 1977 - Peter Baltren, Ware Junior High School

November 1977 - CETA workers involved in developing a career education program at Franklin High School

February 1978 - Kay Barone from Berkly Junior High School, Berkly, Massachusetts

March 1978 - Paul Carlotto, Career Education Coordinator, Tewksbury School System, Tewksbury, Massachusetts

April 1978 - Betsy Walcott, Career Specialist, Dartmouth High School

Lynn

November 1976 - Glenda Sealy - United South End Settlement

December 1977 - City-Wide Coordinator from Salem High School; Jeanne Leyden and Bob Cohen - Community Mental Health Program

January 1977 - Ken Martin - Guidance counselor from Swampscott High School

March 1977 - Pat Budd - Career Education Coordinator for Peabody School System

April 1977 - Dick Calderone - Guidance counselor for Marblehead High School

April 11, 1977 - Kathy Teehan, Director of Opportunity Center, Lynn, Massachusetts

May 6, 1977 - Principal of Quincy High School and Quincy Work Coordinator and two counselors, Quincy, Massachusetts

June 1977 - Priscilla Rivers, Director of Guidance,
Winthrop High School, Winthrop, Massachusetts

e. Dissemination

By its nature, a demonstration project dictates the growth of dissemination. It stems from implementation of the grant goals and objectives within the site to gradual extra-site activity as these goals are met.

OCAP involved two very different sites and dissemination initiated from the project staff to the site staffs. In many cases, materials and technical assistance activities proved useful in both sites; in others materials and technical activities were adapted or developed particular to one site only. Through project staff, teacher, counselor, and student feedback, materials were monitored and evaluated over the project span. This gradual development of materials and/or strategies and processes evolved into products and technical assistance packages, which became more widely disseminated toward the last quarter of the project.

This section of the report will be divided into major headings I and II. The first breaks down the most used materials and technical assistance to those of general interest and to those of special interest to particular target groups within the grant sites themselves. The second will identify, by state and national listings, persons and groups to whom OCAP made presentations or provided materials or technical assistance outside of the grant sites.

Due to space and time concerns, samples only of the materials and technical assistance packages disseminated are appended.

I. A. Of General Interest - In CIC - Both Sites

. Multi-Media Career Information Resources - researched, ordered, purchased, evaluated, catalogued, and maintained by OCAP and project staff - primarily CIC coordinators Diane Hayes at King Philip and Monica Sullivan (1975 through 1977) at Lynn. (See Appendix A.)

. A series of monographs, articles, speeches, book excerpts of interest on career education, clustering, work, etc.

. 29 Eric searches - resource listings pertinent to particular topics of interest to academic (King Philip and Lynn) and vocational (King Philip) faculties. (See Appendix k.)

. Guidance Pacs - Description attached (see Appendix l).

B. For Teachers

1. Developed by/through project staff:

. Career Information Center Activities Package.

. Media Approaches to Career Education.

. Teacher-Developed Programs for Career Education.

. Careers Related to School Subjects (see Appendix m).

. How to Develop and Implement a Skill Exploratory Program.

. How to Develop and Implement a Community Resource System. (See Appendix R.)

. Community Resource Directory - King Philip. (See Appendix S.)

. Community Resource Directory - Lynn. (See Appendix n.)

. Packet Series - (sample, Appendix o).

* Career Education for Minority and Female Students.

* Linking Mathematics to Career Education.

* Social Studies and its Career Implications.

* Linking Social Studies to Career Education.

2. Teacher-developed with OCAP technical assistance

. English instructional packages for 9th grade - career education activities - G. Tirone, Avon High School, July 1976 - (sample, Appendix L).

. Machine related materials - William Moore - King Philip, July 1976 - (sample, Appendix K).

. King Philip Career Education Plan (see Appendix O).

C. <u>For Counselors</u>

1. OCAP provided

. Careers and Me (Appendix E).

. Guidance Department Action Plan for Career Education.

. How to Set Up a Career Information Center.

. CIC Paraprofessional Manual.

. King Philip Career Education Plan.

2. Counselor Developed with OCAP Technical Assistance

. The Role of the Guidance Department in Career Education - D. Keliher (King Philip) (Appendix H).

. Ninth Grade Course - Explore and Choose - Don Twomey (King Philip)

D. Administrators - OCAP Developed

. How to Develop a School-Wide Career Education Implementation Workshop Package.

. Pre-Planning for Career Education Workshop Package.

. Career Education for Minority and Female Students.

. Summaries and Updates on OCAP Activities, Impact and Progress.

. Position and Role Descriptions Within Both School Systems.

II. A. Materials and/or Technical Assistance Provided

1. In-State

. Norfolk County Lung Association, Inc.
Norfolk, Massachusetts

. Lesley College School for Children
Cambridge, Massachusetts

. Foxboro High School
Foxboro, Massachusetts

. North Attleboro High School
North Attleboro, Massachusetts

. Grafton Memorial Senior High School
Grafton, Massachusetts

- Newton North High School
  Newton, Massachusetts
- Millbury School Department
  Millbury, Massachusetts
- Medfield Public Schools
  Medfield, Massachusetts
- Auburn High School
  Auburn, Massachusetts
- Grafton Memorial High School
  Grafton, Massachusetts
- Marshfield High School
  Marshfield, Massachusetts
- Quincy High School
  Quincy, Massachusetts
- Tewksbury Public Schools
  Tewksbury, Massachusetts
- Ware Public Schools
  Ware, Massachusetts
- First National Bank of Boston
  Civic Affairs Department
  Columbia Point Center
- Bedford High School
  Bedford, Massachusetts
- Waltham Public Schools
  Waltham, Massachusetts
- Education Manager
  Essex Agricultural School
  Hathorne, Massachusetts

- North Middlesex Regional High School
  Townsend, Massachusetts
- Medford Public Schools
  Medford, Massachusetts
- Tri Lateral Council for Quality Education, Inc.
  Boston, Massachusetts
- ESAA Project
  Boston, Massachusetts
- Roxbury/Harvard School Program
  Cambridge and Roxbury, Massachusetts
- Harwich Intermediate and Junior High Schools
  Harwich, Massachusetts
- Wayland High School
  Wayland, Massachusetts
- Westwood High School
  Westwood, Massachusetts
- Weymouth High School
  Weymouth, Massachusetts
- Winthrop High School
  Winthrop, Massachusetts

2. Out-of-State

- University of Maryland - Vocational Curriculum Reserach and Development Center
- Board of Education of the City of New York
  Systemwide Career Education Model K-18
  Project SCECAMP

- Spaulding Secondary Complex
  Rochester, New Hampshire
- George Washington University Library
  Washington, D. C.
- Baltimore Public Schools
  Baltimore, Maryland
- Special School District of St. Louis
  Town and Country, Missouri
- Boulder Valley Public Schools
  Boulder, Colorado
- Department of Educational Media
  Millersville State College
  Millersville, Pennsylvania
- College of Education, Department of Industrial Education
  University of Maryland
  College Park, Maryland
- Harcum Junior College
  Career Resource Center
  Bryn Mawr, Pennsylvania
- BOCES-NERC
  Westbury, New York
- Brandywine Public Schools
  Niles, Michigan
- Ocean County College
  Tom's River, New Jersey
- DuPage Elementary Career Education Center
  Wheaton, Illinois

. Project Counselor
Special Service Building
St. Anthony, Idaho

. School of Education
University of California at Berkeley

. Alexander-Pulaski County
Vocational-Technical Cooperative
Tamms, Illinois

. State of Arkansas
Department of Education

. Crisis and Counseling Center
Augusta, Maine

. Associated Builders and Contractors, Inc.
Baltimore, Maryland

. PLUS
Denver, Colorado

. Syracuse University
Syracuse, New York

. Model Secondary School for the Deaf
Washington, D. C.

. University of Alabama at Birmingham
Birmingham, Alabama

. Educational Testing Service
Princeton, New Jersey

3. Outside United States

. Educational Opportunity Center
New Brunswick, Canada

. Peter P. Bielak
Public Relations
Department of State
Maseru, Lesotho
c/o Washington, D. C. 20520

B. Presentations Made and/or Workshops Provided by Project Staff

. Natick High School Inservice Seminar - 10/23/75.
. Meeting Presentation to Director of Lynn Business Leaders - Director of Community Programs for General Electric, Director of Lynn Merchant's Association, President of Lynn Chamber of Commerce - 11/6/75.
. Burlington High School Guidance Department - 11/75.
. The Education Cooperative - Guidance Counselor's Workshop - 12/18/75.
. Westwood High School - 1/26/76.
. The Education Cooperative - Career Education Workshop - 1/9/76.
. AERA/ASCD Annual Conference - Florida - 3/13-17/76.
. Greater Lawrence Vocational-Technical High School Inservice Seminar - 3/16/76.
. Massachusetts Vocational-Technical Guidance Director's Association Meeting - 3/18/76.
. City of Cambridge CETA Workshops - 3/23/76 and 3/30/76.
. Dedham High School Faculty Career Education Workshop - 4/7/76.

- Cape Cod Instructional Materials Center Workshop - 5/5/76.
- Massachusetts School Counselors Association Career Education Committee - 5/76.
- Springfield Teachers - Career Education Workshop - 7/26/76.
- Presentation to Massachusetts Chemical Society.
- Boston Middle School Project Workshop Series - total professional staff effort - Summer 1976.
- Greater Boston Regional Education Center - Team Training and Staff Development Workshop Series - 10/27/76.
- 8th Annual Conference - International Congress for Individualized Instruction - 11/17/76.
- Burlington High School Guidance Department Career Education Workshop - 11/76.
- Lynn Community Workshop - Expanding Career Options for Students - 3/15/77.
- Southeast Regional Career Education Workshop - Career Information Center - 4/77.
- Salem State College Workshop - Student Career Planning - 4/25/77.
- Massachusetts Personnel and Guidance Association Panel - 4/28/77.
- Massachusetts School Counselors Association Conference - 5/10/77.

- Five State Invitational Leadership Conference on Career Education - 6/27-28/77.
- Submission by Request of OCAP Interim Report to American Institute for Research - 9/77.
- The Evaluation Network Third Annual Conference - St. Louis, Missouri - 9/26/77.
- Bristol County Teachers Association - OCAP Career Information Center - 11/77.
- Massachusetts State Occupational Education Team Leaders Meeting - 11/21/77.
- Boston University - Class on Administration Problems in Career Education
- Southeast Region Guidance Workshop - 1/18/78.
- City of Lynn Title I Workshop Series - 11/77 - 5/78.
- Tewksbury School Department Inservice Day - 5/2/78.
- Northeast Region Educational Center Workshop - 5/15/78.
- Bridgewater College Graduate Career Education and Guidance Course Class - 6/78.

The OCAP project was further disseminated through staff membership and participation in organizations beyond those within project sites; i.e., Lynn Community Resource Identification Task Force - 1977/1978; State Regional Career Education Task Forces - Southeast and Northeast Regions, 1977/1978; Part D Demonstration Projects Network, 1976/1977/1978; Lynn Community Advisory Committee, 1976/1977.

One major dissemination effort was undertaken in May, 1978 with the mailing of what has come to be referred to as our OCAP matchbook, enclosed under separate cover. Sent to:

- Career Education Coordinators at Senior High Schools in Massachusetts.
- Regional Education Centers in New England, New York and New Jersey.
- Sampling of Curriculum Directors and Supervisors of Instruction in Massachusetts and New England.

f. Data Collection and Evaluation

One of the problems plaguing the development and improvement of exemplary projects in career education has been an inability of evaluators to show significance in student gains as a result of innovative program implementation. This is attributed to insensitivity of standardized tests, contamination of control groups in the regular school setting and a lack of comprehensiveness in evaluation designs. The problems faced by evaluators stem from the inappropriateness of most hard evidence producing evaluation techniques for the real or non-clinical setting of school systems. The playing field of demonstration projects is infested with intervening variables beyond the control of the project staff. Yet those same projects staffs find it impossible to improve their efforts without proof of their success or failure to reach the objectives of the project.

The problem to be dealt with, is that of developing evaluation procedures which will determine, through objective evidence, the merit of a demonstration project that uses an infusion approach to career education in an ongoing school system. The design of this process has emerged from a demonstration project, the Occupational Competence Access Project, funded under the Vocational Education Act. We are currently in the third and final year of that grant and have already recorded statistically significant student gains in the areas of readiness for work, decision making and career awareness. Beyond that there have been data collected and analyzed concerning the project's impact on all levels of the school site professional staff and a documentation of the events leading to the project's successes and failures.

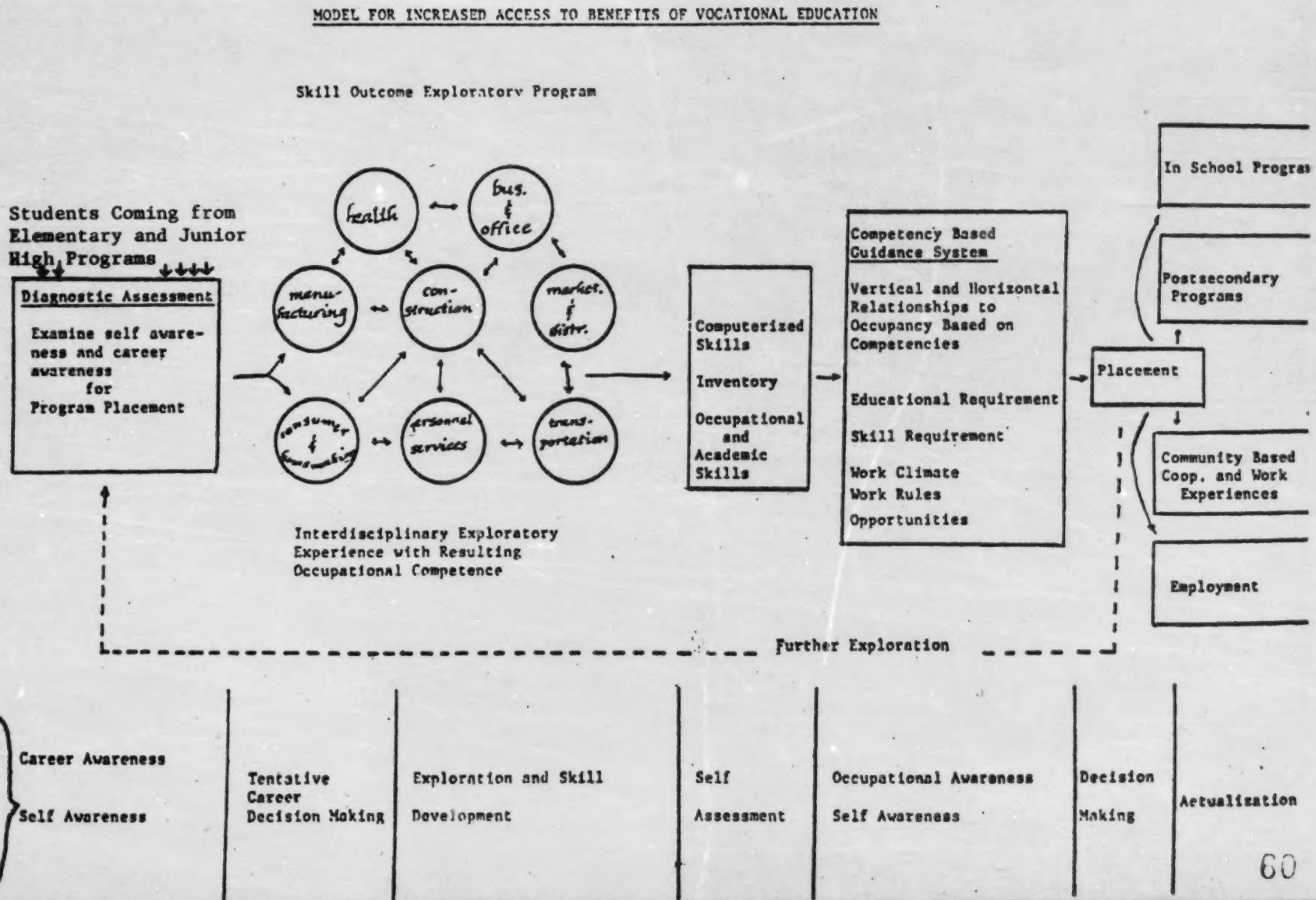
The approach has grown out of the mutual commitment of both evaluators and the project staff not to be satisfied with compliance as an end result of evaluation.

The context within which the evaluation design is developing is a three-year demonstration project conducted in the city of Lynn, Massachusetts and the suburban rural district of King Philip in Wrentham, Massachusetts. Each site reflects respective urban or rural make-ups in population, employment, and socio-economic status. The project is to demonstrate the viability of a cluster oriented comprehensive model for the delivery of career education and vocational education at the secondary level. The following goals were established for the endeavor:

1. To facilitate student access to occupational opportunities through provision of a guidance system which incorporates student capabilities.
2. To facilitate student access to occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation.
3. To facilitate student access to employment and training opportunities through the development of a comprehensive articulation between curriculum levels, curriculum areas and the world of work.

The conceptual model for a system which operationalizes these goals (Figure 1) is being implemented using selected change strategies (Havelock 1973) and employing a success model infusion technique. This adventure required that

Figure 1.


MODEL FOR INCREASED ACCESS TO BENEFITS OF VOCATIONAL EDUCATION
Skill Outcome Exploratory Program
Students Coming from Elementary and Junior High Programs
Diagnostic Assessment
Examine self awareness and career awareness for Program Placement
health
bus. & office
manu-facturing
con-struction
market. & distr.
consumer & homemaking
personal services
trans-portation
Interdisciplinary Exploratory Experience with Resulting Occupational Competence
Computerized Skills Inventory
Occupational and Academic Skills
Competency Based Guidance System
Vertical and Horizontal Relationships to Occupancy Based on Competencies
Educational Requirement
Skill Requirement
Work Climate
Work Rules
Opportunities
Placement
In School Programs
Postsecondary Programs
Community Based Coop. and Work Experiences
Employment
Further Exploration
Student Activity Process
Career Awareness
Self Awareness
Tentative Career Decision Making
Exploration and Skill Development
Self Assessment
Occupational Awareness
Self Awareness
Decision Making
Actualization

components of the model be operationalized and then infused into as many areas of the curriculum as feasible.

The model features a systems approach guidance function coupled with career resource utilization strategies; a competency based interdisciplinar/ approach to career related instruction in both academic and vocational classrooms and a continuous progress oriented system of articulation between junior and senior high schools and the working world of the community. The project is being conducted by a team of external change agents from the Institute for Career Research with the principal actors in the implementation being school site professional and paraprofessional staffs. The project has expanded from its inception to a point where all personnel at the project sites have interfaced with the OCAP staff and have, to some degree, received at least an orientation to the procedures of the project. Within this environment exists the typical pitfalls of evaluation mentioned above; contamination due to popularity of the project, subtle gains which defy measurement, yet exist in the eyes of the staff; intervening variables which muddle the cause and effect relationship of the project components and a comprehensiveness which reaches into virtually every corner of the school curriculum.

To report on the evaluation design of this project is to report on a developmental model which has taken more definitive shape as the evaluators and project staff met with problems during the course of the project. Solutions to those problems were formulated with the underlying intention of improving our capabilities to monitor student gains, determine evidence of impact, document how we got to where we are and predict where we are going.

The initial design of the evaluation for the OCAP project was focused on three areas of data collection which would satisfy our needs to ascertain student gain, practitioner acceptance and system impact. Dr. Thomas Harrington was awarded the contract and assembled a group of evaluators to employ a variety of methodologies, i.e. pre-post testing on norm-referenced instruments, structured interviews, school site visits and a descriptive survey. The results of that first year showed no significant student gain, the beginnings of evidence of system impact and a high level of acceptance by a small number of teachers and counselors involved in the program.

Students gains were measured through the use of three assessment instruments: Deciding, College Entrance Examination Board; Occupational Knowledge Assessment Test, Massachusett State Department of Education; Career Maturity Inventory, California Test Bureau/McGraw Hill. This approach gave the evaluators a broad based assessment of student progress across a variety of variables and afforded comparison against state and national norm data. The testing took 3 hours and 40 minutes and was applied to 100 experimental and 100 control students in each of the two sites.

The results were inconclusive due to the shrinkage in the original samples, contamination of the experimental and control group by students who switched courses or teachers, and the secondary impact, particularly in the later months of the project, caused by the infusion approach to dissemination throughout both sites. In some cases the control group actually improved more than the experimental. These hard data disproved what the project staff viewed as progress toward the project goals.

The system impact was measured through an on-site assessment, using structured interviews and a review of the status of career education in both sites prior to the start of the project. Post-assessments of the same nature were conducted in the spring of the first project year and compared with pre-assessment results. The report showed that, in fact, things were happening in the sites which would verify the project's influence. However, there was no evidence of the specific effects that one or a series of project events had on this impact. Indeed, it was very hard to simply construct, on a gross basis, what activities were being accomplished on behalf of the implementation of the OCAP model.

Teachers, counselors, and administrators were interviewed to determine their acceptance of the OCAP products and/or methods. Their opinions, although very positive, demonstrated a lack of understanding of the project's intentions and were, by in large, comments on the ability and personality of OCAP staff members. There were also problems in tracing the activities of the project during the year and making some effort to determine significant from non-significant events. In spite of these problems the evidence of accomplishment was sufficient for compliance with the funding regulations and our objectives. There was, however, a strong feeling on our part that the project was having greater impact than was shown and that certain redesigning of the evaluation plan would greatly improve our ability to prove the project's merit.

The second year incorporated three major revisions aimed at capturing more data in the areas of student gains, practitioner acceptance and system impact. The original student assessment instruments were analyzed for overlap

and through an item analysis reduced the instrument to a 93 item application which took an average of 40 minutes to administer. Where appropirate, blocks of items were used to preserve possible comparisons with national or state norm data available for the individual tests. A teacher assessment instrument was developed which reflected the level of involvement and acceptance each participant had in the project. Finally, a critical incident reporting form was developed and a set of operational objectives and action plans were generated to enable the project staff to more precisely articulate their activities. The instruments were applied to all students in both sites as a pretest: all teachers and councelors were administered the Professional Staff Survey and critical incident logs were kept by project staff from the Institute for Career Research.

The results of this increased data collection approach were that we were able to ascertain trend data which, in some cases, were statistically significant relative to student gains. A preferential treatment group was established and compared to a random treatment group in each of the school sites. The Professional Survey rendered substantially more complete information about staff readiness to accept career education and the relative impact that OCAP was having on their activities. The critical incident reports for both sites were analyzed and plotted to give an accurate account of the events which took place throughout the year. These data have given us a much better conception

of the project's status and has opened the possibilities of restructuring based on hard evidence as well as emphasizing those aspects of the project which are proving most worthwhile.

The evaluation plan for the third year of the project is to post-test the entire student population in both sites and compare a preferential treatment group with a random treatment group to ascertain areas of overall student gain. A post-test using the Professional Staff Survey will show trends in teacher-counselor acceptance of the project processes and products and their level of knowledge and acceptance relative to the concepts underlying career education. Department chairpersons will be trained to report critical incidents thus increasing the potential data flow that records events which have an impact on the system in terms of policy, procedures and roles. Additionally, certain component processes and products will be scrutinized and cross-validated on a mini-study basis in which criterion tests will be linked to the objectives of a particular instructional strategy or product to determine the effectiveness for accomplishing specified goals within the model.

A useful format for analyzing this emerging model for evaluating exemplary projects was advanced by Dr. David Tiedman in the June 1977 Leadership Conference for Vocational Exemplary Projects. Figure 2 outlines this format which defines evaluation as observing, resulting in perception, conception and acceptance.

The model shows three functions of evaluation as: compliance, for public audiences; comprehension, resulting in personal rewards; and influence, resulting in transactional outcomes. During the initial stages of the project we

Evaluation = Observing, Resulting in Perception, Conception and Acceptance

Compliance Level

Perception, A Function of Examination Requires

. . . Standard of authority

. . . Statement of components to be evaluated

. . . Statement of decisions to be made

. . . Evidence of accomplishment

Comprehension Level

Conception, A Function of Perceptions Requires

. . . Intuition

. . . Activity grounded in perceptions and intuition

. . . Recycling

. . . Hierarchical restructuring

Influence Level

Acceptance, A Function of Perceptions and Conceptions Requires

. . . Consistency...clarity...creditability

. . . Education with reflexive coherence

Figure 2.

were concerned primarily with compliance as an outcome of evaluation. This required a standard of authority, a statement of the components to be evaluated and decisions to be made. The evaluators looked for evidence of accomplishment based on their examination of what was actually being accomplished. These examinations results in perceptions which were relayed in the form of reports suitable for accountability to the government.

A new level of involvement was achieved during our planning for the second year as we tried to understand more about what we felt was growing in our work. Tiediman (1977) describes this phase as the comprehension level of evaluation in which the perceptions of evaluation and the intuition of those involved in the project begin to interface, causing a recycling and hierarchal restructuring of the work. This conception of what would improve the project resulted in several programmatic and staff assignment changes which accelerated the project work plan. The evaluation design also expanded since it had become apparent that more data was needed if the staff was to make sound decisions about the course of the project. An interesting outcome of this leap into comprehension level was that although our primary concern, to understand more about our work, came from a personal motivation, the compliance or accountability aspects of the project took care of themselves. Our demands for data exceeded those required of us by the funding source.

The final year of the OCAP project finds us projecting into the influence function of evaluation. Our efforts are focused on gaining acceptance by others of the work we have done. To accomplish this, issues of consistence, clarity

and credibility, must be addressed. It appears to be a time when those aspects of the work that appear to be successful will come under increased analysis. The data collection and analysis of student gains will be most important. Ultimately, there will be a need to make some coherent statement about what is useful from the work.

The evaluation model which will be constructed, as a result of our experience, will help other exemplary projects accelerate quickly beyond compliance as the sole function of evaluation and move to a point where the evaluation becomes an integral part of the dynamics of the project. Beyond that point, we hope to map the route toward making the evidence of success in a project acceptable to others wishing to use parts of or whole demonstration projects.

To date we have experienced the profits of an evaluation strategy which attempts to collect maximum amounts of data in the least disruptive manner to the school environment. The collection of such data has become integral to the work of the project and has assisted the staff and participants in understanding what makes the model work. By-products of the experience, the Occupational Knowledge Assessment Instrument, the Professional Staff Survey and the Critical Incident format are useful as models in other projects. The difference, however, in this experience versus other demonstration projects we have worked on, is that the commitment and integration of the evaluation and project staffs has put a more tangible meaning to the notion of formative evaluation. We hope to convey that through the dissemination of our work.

ASSESSMENT OF STUDENT OCCUPATIONAL KNOWLEDGE IN OCAP IMPLEMENTATION SCHOOLS

The Third Party Evaluators Report
Of The
Third Year
Of The
Occupational Access Competence Project (OCAP)

June 1978

PURPOSE: To assess the student body of King Philip Regional High School and Lynn English High School in terms of their occupational knowledge and decision making skills.
The data herein is to be viewed from two perspectives: the amount of change and/or increased knowledge to have occurred in a one-year period and the status of these two student bodies in relation to their occupational knowledge and decision making skills as of December 1977.

ASSESSMENT OF STUDENT OCCUPATIONAL KNOWLEDGE
IN OCAP IMPLEMENTATION SCHOOLS

Background

The first year of the Occupational Competence Access Project (OCAP) involved two small samples of students selected from two Massachusetts school systems - Lynn English High School (N=38) and King Philip Regional High School (N=41). These schools represented an urban school and a suburban comprehensive regional school district. The design used to assess student impact was pre-post tests with control and experimental groups employed. Quoting from The Third Party Evaluators' July 25, 1976 report:

> These results indicate that it is possible to bring about change with a group of students who are not apparently overtly motivated toward school and whose poor school attending behaviors exceed the norm for their respective communities. These findings also show that when a program is offered to students that meets their needs, positive attitudes toward education and training do develop.

OCAP altered their goals in the second year of the project and the plans to monitor impact upon students required a different design methodology and instrumentation to accommodate OCAP's broadened implementation strategy. OCAP was required to reaffirm its goals for the 1976-1977 year accompanied by outcome statements for specified objectives. To accommodate this adjustment, The Third Party Evaluators had to incorporate a time allowance in collecting the pre-assessment data for all students in both

schools which occurred during November 1976. The results of this assessment are described in The Third Party Evaluators' report Project Review, March 24, 1977.

To monitor OCAP's progress in working with two cooperating teachers, post-testing was done during May 1977 with seventy percent of the King Philip ninth graders through the English Department and all eleventh graders enrolled in Science courses at Lynn English High School (N=92). King Philip's sample was analyzed as a preferential treatment group (N=47) and random treatment group (N=78). The term random treatment was used because of OCAP's total infusion strategy which resulted in an unspecified number of teachers possibly experimenting with career exploration strategies. The preferential treatment group was exposed to a defined set of career awareness activities. Of special significance was the fact that the preferential group were non-college oriented students. The Lynn preferential sample was too small to merit separate analysis. Quoting from the Conclusion section of The Third Party Evaluators' July 23, 1977 report:

> Both populations experienced considerable change in this six month period in the areas of self and career awareness. Students are definitely being impacted and significant changes occurred among the students....King Philip students experienced differential impacts depending upon what treatment groups they experienced.

Student assessment for OCAP's third year of the project occurred one year later in early December 1977 for all students in both of these high schools. No make up testing date was employed,

which resulted in the overall reduction of pre-post data.

Instrument Design

In the first year of the project three assessment devices were used which required 140 minutes or three classroom periods. The instruments were: Crites Career Maturity Inventory (CMI), Deciding - a College Entrance Examination Board device, and the Massachusetts Occupational Knowledge Assessment 1974 Test (OKAT). The latter is currently being used by the Massachusetts Department of Education for its 1977-1978 Statewide Educational Assessment Program and is considered a criterion-referenced test. To match OCAP's infusion model the evaluative instruments used in the second year needed to meet three criteria: instruments which paralleled the project's goals, provision for a continuity of data with the first year's evaluative design, and instruments that would enable a comprehensive collection of data on all students within a school which was also easily administered within a class period. A shortened and in some cases rewritten version of the above instruments was deemed most appropriate to satisfy these criteria. Albeit this described instrumentation would, because of the necessary shrinkage in length, be a gross assessment. It was found in field testing that ninety-three pieces of data were able to be collected within the typical class period with a time allowance for directions for administration and the distribution of materials.

Wherever possible entire subsections of the original devices, especially the OKAT, were used to permit direct comparisons of subscores with published norms. Extensive examination of the item analysis of the first year data and verification with other researchers throughout the country revealed that many of the CMI

items were totally non-discriminating and the response set problem on the Attitude Scale was found to be distracting to the test taker. Suitable items were accordingly selected on the basis of this item analysis work. Several of the decision making abilities were reformated to allow better clarity for the survey taker and simultaneously provide the clearest data for analysis. As a result of the Spring 1977 Federal Site Visitation Team comments regarding sex bias reflected in the items drawn from the CMI, six items (47, 49, 53, 54, 56, and 59) were rewritten or edited to provide for better sex balance and elimination of sexist connotation. A study of projected job forecasts for the Boston SMSA area was used in determining which occupations to include in the instrument.

The Occupational Knowledge Assessment Test accordingly developed provides data in the following content areas:

	Number of Questions
Work Attitudes	4
School Assistance for Job Knowledge	6
Knowledge of Occupational Trends	10
Knowledge of Educational Requirements of Occupations	6
Knowledge of Training Requirements for Occupations	10
Knowledge of Level of Mathematic Ability Used in Occupations	5
Decision-Making Abilities Estimate	4
Goal Selection (choosing a job) Competence	5
Planning Competence	5
Problem Solving Competence	5
Three Occupations Currently Considering	1
Self Awareness of Abilities	13
Relate Abilities to Occupations	12
Background Information Future Plans (work, school, etc.), visited counselor, educational level of head of household, attitude toward school	7
	93

Description of the Population

The students at King Philip reported the following approximations about their parents. Thirty percent of the heads of households graduated from college, ten percent had some college experience, twenty percent attended a specialized training school after high school, thirty percent graduated from high school, and ten percent did not finish high school. Twenty percent of the heads of households were employed in professional or technical occupations, thirty percent were in managerial, sales positions or were business proprietors, thirty percent stated they were skilled workers, ten percent reported their parents were in semi-skilled occupations, and ten percent were in unskilled or laborer positions. The educational aspirations of the students were: forty percent intend to go to a four-year college, twenty percent to a specialized training program after high school, twenty percent plan to go to work upon graduation, and twenty percent were undecided about their future plans.

The students at Lynn reported the following approximations about their parents. About one-third of the heads of households graduated from college, ten percent attended some college, ten percent attended specialized training schools after high school, one-third finished high school, and ten percent did not finish high school. Twenty percent of the heads of households were employed in professional or technical occupations, one-quarter were in managerial, sales positions or were business proprietors, one-quarter were in the skilled trades, twenty percent were employed at semi-skilled jobs and ten percent were in unskilled or laborer positions. The

educational aspirations of the students were: sixty percent plan to attend a four-year college, ten percent intend to go to a specialized training school after graduation, five percent plan to enter the armed services, ten percent plan to go to work and fifteen percent indicated they were undecided about their future plans.

Summary and Discussion

Table 1 reports the data following the design used in the second year of the project where a systematic exposure of specified activities of career exploration occurred with a preferential treatment group of ninth graders compared to a group receiving random exposure to career awareness activities. It is to be noted OCAP scheduled post-assessment before the preferential group's treatment was completed, approximately eight weeks after pre-assessment. Despite this abbreviated exposure, more overall change occurred in this grade than the other three grades at this high school over a period of one year. Significance was tested by use of chi square.

The preferential males' knowledge of educational requirements (.05), training requirements (.05), and planning competence (.001) significantly increased while males demonstrated less ability in goal selection (.05); the females reported greater ability to develop alternatives (.05). The random treatment males reported a significantly better attitude toward school (.05) and the females saw themselves as more capable of using occupational information (.02), while both males and females who substantially noted lower assistance from faculty than the preferential group on pre-

testing significantly (.001) reported on post-testing having received greater help from the school in increasing their job knowledge. The entire class significantly (.001) used the Career Information Center more on post-testing.

Table 2 shows that the sophomore males (.01) and females (.02) reported that they had greater ability to use occupational information. The girls reported receiving significantly (.05) less assistance from the school staff about careers. While not significant, the boys, too, reported less assistance. It will be recalled that this class made substantial gains last year as freshmen and could be reflecting upon their very positive experiences as ninth graders.

Table 3 displays that change occurred only for junior girls. They noted receiving greater assistance from school personnel (.01), used the CIC more (.05), and displayed a greater planning competence (.01).

Table 4 reports that senior males perceived themselves to be better at developing alternatives (.02) and had greater career planning competence (.05). The senior females noted receiving greater assistance from faculty in learning about careers (.02), improved their knowledge of educational requirements (.05), and used the CIC more (.01).

Results from Lynn students are reported in the next three tables. The data administered in Table 5 covers a two-month span between testing. Inspection reveals the scores to be generally stable. Only one area, self perception of tenth grade boys' ability to use occupational information, decreased significantly (.05).

Table 6 shows both Lynn male and female juniors significantly (.001) used the Career Information Center more and that females' knowledge of training requirements for occupations also improved (.05).

With the exception of senior girls using the Career Information Center more (.01) Table 7 reveals all significant changes having occurred with the boys. They reported receiving more school assistance about occupations (.01); they perceived themselves as having greater knowledge of their personal values (.05); their competence in goal selection (.05) and problem solving (.05) increased significantly and they used the Career Information Center more (.001).

The above results and analysis of the data in the tables follow the design whereby the question could be studied: Did significant change within a year period (November 1976 - December 1977) occur in various dimensions of career development. Now another series of analyses will be described: Is the career development of these students progressing systematically, what is their current development level, and, where the information is available, how do these students compare to other representative youth in these same attitude and occupational knowledge areas.

Tables 8-11 examine the occupational knowledge of the King Philip student body. When each grade is studied separately the median score performance in most competences shows a steady positive growth in knowledge in each of the four high school grade levels. When students in all grades were compared with statewide Massachusetts norms including comparable kind of community,

Table 1

Occupational Knowledge Assessment By Median Scores

King Philip Grade 9

	PRE				POST			
	Male		Female		Male		Female	
	Prefer (N=49)	Random (N=80)	Prefer (N=30)	Random (N=104)	Prefer	Random	Prefer	Random
Work Attitudes	77	68	49	56	80	72	59	57
School Assistance	38	18	34	17	45	29	34	29
Occurational Trends	51	45	47	44	55	44	41	39
Educational Requirements	22	27	22	15	32	21	25	21
Training Requirements	23	36	35	43	34	41	33	44
Mathematical Ability in Occupations	80	77	63	70	73	72	56	78
Decision Making Ability Ratings*								
Knowing Personal Values	55	70	60	76	61	81	62	66
Planning Ability	69	72	57	61	71	60	50	65
Use of Occupational Information	43	51	33	38	39	42	37	53
Developing Alternatives	73	56	43	60	67	60	56	61
Career Development Skills								
Goal Selection	37	30	20	32	24	37	19	32
Planning	29	42	37	39	47	46	37	47
Problem Solving	31	24	20	29	31	32	16	37
Have Used CIC	47	32	43	14	73	55	56	66
Positive Feelings Toward School	41	54	47	63	43	69	53	65

*Better than average self rating

Table 2

Occupational Knowledge Assessment by Median Scores

King Philip Grade 10

	PRE		POST	
	Male (N=89)	Female (N=89)	Male	Female
Work Attitudes	68	58	73	57
School Assistance	32	40	24	27
Occupational Trends	45	44	48	41
Educational Requirements	29	23	24	23
Training Requirements	33	43	43	48
Mathematical Ability in Occupations	82	75	81	80
Decision Making Ability Ratings				
Knowing Personal Values	62	58	72	68
Planning Ability	59	62	63	60
Use of Occupational Information	46	39	64	54
Developing Alternatives	55	50	64	60
Career Development Skills				
Goal Selection	38	38	46	38
Planning	42	45	53	56
Problem Solving	38	42	30	42
Have Used CIC	46	55	62	71
Positive Feelings Toward School	46	57	53	60

Table 3

Occupational Knowledge Assessment by Median Scores

King Philip Grade 11

	PRE		POST	
	Male (N=63)	Female (N=67)	Male	Female
Work Attitudes	65	58	69	63
School Assistance	32	19	31	31
Occupational Trends	53	47	46	43
Educational Requirements	31	21	33	20
Training Requirements	45	45	50	51
Mathematical Ability in Occupations	81	78	83	79
Decision Making Ability Ratings				
Knowing Personal Values	61	61	69	74
Planning Ability	65	61	67	64
Use of Occupational Information	48	50	52	51
Developing Alternatives	63	59	56	61
Career Development Skills				
Goal Selection	48	43	52	45
Planning	49	43	57	61
Problem Solving	33	33	48	39
Have Used CIC	43	58	48	75
Positive Feelings Toward School	48	57	48	59

Table 4

Occupational Knowledge Assessment By Median Scores

King Philip Grade 12

	PRE		POST	
	Male (N=76)	Female (N=77)	Male	Female
Work Attitudes	67	58	70	63
School Assistance	25	26	22	39
Occupational Trends	48	43	43	35
Educational Requirements	32	30	32	41
Training Requirements	61	59	60	65
Mathematical Ability in Occupations	80	90	81	84
Decision Making Ability Ratings				
Knowing Personal Values	68	82	79	89
Planning Ability	54	57	56	56
Use of Occupational Information	41	51	47	57
Developing Alternatives	50	56	68	61
Career Development Skills				
Goal Selection	46	52	44	58
Planning	45	58	60	70
Problem Solving	36	42	38	52
Have Used CIC	51	62	55	83
Positive Feelings Toward School	50	68	61	70

Table 5

Occupational Knowledge Assessment By Median Scores

Lynn Grade 10

	PRE		POST	
	Male (N=133)	Female (N=200)	Male	Female
Work Attitudes	66	63	64	57
School Assistance	16	27	17	23
Occupational Trends	43	39	44	43
Educational Requirements	28	28	31	24
Training Requirements	46	50	48	54
Mathematical Ability in Occupations	85	73	80	85
Decision Making Ability Ratings				
Knowing Personal Values	65	65	66	68
Planning Ability	68	65	58	65
Use of Occupational Information	56	52	39	46
Developing Alternatives	56	65	49	63
Career Development Skills				
Goal Selection	42	42	50	39
Planning	47	43	53	49
Problem Solving	37	33	36	33
Have Used CIC	15	15	19	21
Positive Feelings Toward School	45	63	55	65

Table 6

Occupational Knowledge Assessment By Median Scores

Lynn Grade 11

	PRE		POST	
	Male (N=130)	Female (N=189)	Male	Female
Work Attitudes	61	53	57	51
School Assistance	12	20	18	23
Occupational Trends	43	40	45	38
Educational Requirements	31	27	39	34
Training Requirements	48	47	57	61
Mathematical Ability in Occupations	78	76	81	83
Decision Making Ability Ratings				
Knowing Personal Values	61	64	66	69
Planning Ability	61	61	55	49
Use of Occupational Information	49	38	38	38
Developing Alternatives	52	59	56	50
Career Development Skills				
Goal Selection	46	48	49	47
Planning	47	53	54	61
Problem Solving	41	44	48	44
Have Used CIC	7	10	22	30
Positive Feelings Toward School	55	71	63	68

Table 7

Occupational Knowledge Assessment by Median Scores

Lynn Grade 12

	PRE		POST	
	Male (N=78)	Female (N=126)	Male	Female
Work Attitudes	59	56	62	56
School Assistance	18	28	30	29
Occupational Trends	43	38	44	34
Educational Requirements	42	31	43	37
Training Requirements	56	54	61	58
Mathematical Ability in Occupations	83	85	85	89
Decision Making Ability Ratings				
Knowing Personal Values	56	64	71	73
Planning Ability	56	59	58	59
Use of Occupational Information	39	36	47	40
Developing Alternatives	54	48	65	53
Career Development Skills				
Goal Selection	41	54	54	53
Planning	64	60	62	66
Problem Solving	42	42	55	50
Have Used CIC	28	30	51	45
Positive Feelings Toward School	50	71	62	64

male and female students, the findings show that in two competences, Knowledge of Occupational Trends and the Mathematical Ability Required in Occupations, King Philip students exceeded the expected performance level and in some grades attained a level considerably above expectation; in one competence area, Knowledge of Training Requirements, three of the six comparisons exceeded norm level, while the other three comparisons approximated almost norm level and in only one competence area, Knowledge of Educational Requirements for Occupations, was performance below norm level. The reader is reminded that the norm groups used for all comparisons were that of seventeen year olds.

A separate examination of sophomores was analyzed to study the long lasting treatment effects of an earlier cited study of this class as ninth graders. They were studied following the ninth grade design of either a preferred or random treatment group. The sample size of obtained pre-post data prevented making meaningful generalized conclusions but posed some interesting questions. Are some specific areas of occupational knowledge as information more prone to be committed to short-term memory, while other areas as sources and procedures to locate information more likely to be considered for long-term memory? To what extent is relevancy and the immediacy of the need for information a factor or a motivation in the immediate learning of occupational knowledge?

The performance in all three grades of Lynn English High School in the four occupational knowledges assessed is characterized in most instances as being above expectation or being at approximately norm level. Gain in the four occupational areas also is typified as being progressive in each successive grade (Tables 12-15).

Self reports of abilities considered important for decision making produced two generalized results: students in each grade of both schools rated Knowing One's Personal Values as their best ability. Growth of self knowledge was progressive in each successive grade. Of the four abilities assessed the Use of Occupational Information was ranked by these students as their lowest ability; however, approximately fifty percent of each grade rated themselves as above average in this ability. Approximately sixty percent of each grade perceived themselves as being above average in their Planning Ability and Ability to Develop Alternatives. An interesting occurrence was noted when opportunities immediately followed in which students could benefit from reality testing. Some students evidently overrated themselves and lowered their self assessments, while others for a range of possible reasons saw themselves in an improved perspective. The point the investigators desire to make is that all positive and valid change is not in a single predictable direction.

Another analysis examined students' pre-post occupational knowledge scores in comparison with those who rated their abilities as excellent and poor. Because the sample sizes studied were too small to justify reliable tests of differences, observations will only be noted. The results of both those with excellent and poor ability ratings showed the approximate same level of improvement. The investigators again wish to state because of this phenomenon the measurement of increased knowledge, growth, etc., is not always a consistent, across-the board process of positive improvement for every individual. It is very conceivable that increased competence in one or several

areas as increased self awareness and knowledge of alternatives can result in poorer motivation for increased planning ability when all the alternatives are seen as non desirable. Also increased occupational knowledge as information about salary, amount of training required, and employment outlook may not be positively correlated with satisfaction and movement toward an initially desired vocational goal.

Regarding the cognitive skill competences of Goal Selection, Planning, and Problem Solving, no direct comparisons could be made with the published norms because of the abbreviated scales used. Inspection of Tables 1 through 7 reveals that for the most part skill development in each area was progressive for each grade level, which is conceptually consistent with the technical data of the Career Maturity Inventory (CMI) by John Crites. Analysis of individual item responses of these samples were comparable with the item difficulty figures published in the trend analysis of the CMI. Therefore, extrapolation of scale scores calculated for the shortened five item scales were estimated to be above the published means of the respective CMI norms. These estimated performance levels would be supportive of the students' self estimates of ability as reported above.

In conclusion, because of the nature of students participating in many varied learning activities with many different teachers, assessment of the effect of a comprehensive career education program is extremely difficult. Evaluation at a macro level mostly gives overall trends. The monitoring of students on an instrument such as the Occupational Knowledge Assessment, which

is a criterion reference instrument, can be a valuable tool to assess if any significant learning areas are being under-emphasized and to examine cverall student development. Micro evaluation serves the purpose well of assessing the effectiveness of a specific function, objective, procedure, etc., but its limitation for drawing inferences as to overall student career development can result in faulty conclusions.

Table 8

King Philip Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Occupational Trends by Median Scores

	Male	Female
Grade 9 - Preferential Treatment	55	41
Grade 9 - Random Treatment	44	39
Grade 10	48	41
Grade 11	46	43
Grade 12	43	35
Norm	46	36

*The Massachusetts norm for 17 year olds for this type of community is 41

Table 9

King Philip Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Educational Requirements by Median Scores

	Male	Female
Grade 9 - Preferential Treatment	32	25
Grade 9 - Random Treatment	21	21
Grade 10	24	23
Grade 11	33	20
Grade 12	32	41
Norm	42	33

*The Massachusetts norm for 17 year olds for this type of community is 39

Table 10

King Philip Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Training Requirements by Median Scores

	Male	Female
Grade 9 - Preferential Treatment	34	33
Grade 9 - Random Treatment	41	44
Grade 10	43	48
Grade 11	50	51
Grade 12	60	65
Norm	61	59

*The Massachusetts norm for 17 year olds for this type of community is 63

Table 11

King Philip Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Mathematical Ability in Occupations by Median Scores

	Male	Female
Grade 9 - Preferential Treatment	73	56
Grade 9 - Random Treatment	72	78
Grade 10	81	80
Grade 11	83	79
Grade 12	81	84
Norm	74	75

*The Massachusetts norm for 17 year olds for this type of community is 77

Table 12

Lynn Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Occupational Trends by Median Scores

	Male	Female
Grade 10	44	43
Grade 11	45	38
Grade 12	44	34
Norm	46	36

*The Massachusetts norm for 17 year olds for this type of community is 40

Table 13

Lynn Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Educational Requirements by Median Scores

	Male	Female
Grade 10	31	24
Grade 11	39	34
Grade 12	43	37
Norm	42	33

*The Massachusetts norm for 17 year olds for this type of community is 37

Table 14

Lynn Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Training Requirements by Median Scores

	Male	Female
Grade 10	48	54
Grade 11	57	61
Grade 12	61	58
Norm	61	59

*The Massachusetts norm for 17 year olds for this type of community is 58

Table 15

Lynn Students' Performance
Compared to Massachusetts Seventeen Year Olds
On Knowledge of Mathematical Ability in Occupations by Median Scores

	Male	Female
Grade 10	80	85
Grade 11	81	83
Grade 12	85	89
Norm	74	75

*The Massachusetts norm for 17 year olds for this type of community is 80

OCCUPATIONAL ACCESS COMPETENCE PROJECT
IMPACT ON SCHOOL SYSTEMS

The Third Party Evaluators Report
Of The
Third Year
Of The
Occupational Access Competence Project (OCAP)

June 1978

PURPOSE: To examine the effects of OCAP on local professional staff attitudes and to assess what accomplishments were achieved within local educational systems during the period of September 1975 through December 1978.

The accompanying data then portray two perspectives: the current status of local systems in regard to career education policy, practice, and beliefs and also the amount of local staff change to have occurred within an eight month period.

OCCUPATIONAL ACCESS COMPETENCE PROJECT
IMPACT ON SCHOOL SYSTEMS

INTRODUCTION

During the first year (1975-1976) of the Occupational Competence Access Project (OCAP) a Career Informational Center (CIC) was established in each school and several career education projects were developed by teachers with OCAP's assistance. OCAP developed a useful guidance program, the "Careers and Me" series, the concepts of career education were introduced to guidance, faculty and administration personnel at each site and OCAP began to build its own credibility within the confines of the Lynn and King Philip Regional school systems.

In the second year of the project OCAP's administrative relationship to both sites was altered with one identifiable OCAP site coordinator dealing more closely with each school system's personnel. OCAP took different implementation strategies with each school system because of their varying levels of sophistication in accepting and advancing concepts and techniques of career education.

In this school year (1976-1977) 51 Lynn and 103 King Philip school personnel respectively enrolled in OCAP sponsored graduate level career education courses. A workshop on non-traditional roles for women was held at both sites. Both sites participated

in different activities to involve the community more in the school's career education programs. OCAP personnel encouraged many local faculty to develop their own career projects. A particular focus of OCAP was to work with both sites' administrations to adopt policy statements and role descriptions which would better institutionalize career education within each system.

OCAP's third year was earmarked by two significant occurrences, each definitely impacting upon the other. One of OCAP's site coordinators resigned, which resulted in a decision by OCAP not to replace him in the Lynn Public Schools. A new Lynn central administrator also became responsible for OCAP's involvement within the system. The consequences of these changes were that Lynn English High School could be viewed during this year from the perspective of what would happen in the absence of any direct outside support and the impact of a project such as OCAP on the total system. OCAP determined that post-assessment data on Lynn English High School personnel not be collected on the Professional Staff Survey.

Data concerning the impact on the King Philip school system is covered in three different reports - OCAP's Process Implementation Model, Career Education Projects: Social Studies and English Curriculum Projects at King Philip Regional High School, and within this report the results of the final staff assessment through the Professional Staff Survey. The Process Implementation Report should be read along with the following data to gain a total accurate reflection of OCAP's impact within the King Philip

Regional school system.

LYNN

The focus on career education in Lynn during the third year (1977-1978) has been on the broadening of the Career Information Center (CIC) base to include not only Lynn English High School but all high schools and junior high schools in the system. A team leader from the guidance department of each school was named by the superintendent's office. "City Aids", "Title I Aids", and "Title I Instructors" were appointed to each school. Title I Aids were actually appointed only to the schools that were entitled to Title I moneys. These teams of aids and guidance leaders developed CICs for each school with the obvious exception of Lynn English where the CIC was established two years previously. Each CIC is now functioning, however at different levels of development.

In April 1978 The Third Party Evaluators visited Lynn English High School, Breed Junior High School, Cobbert Junior High School, and Eastern Junior High School. The following is a brief description of the operations of each.

Lynn English High School

The Guidance Team Leader is Mr. Alan Tatle and the City Aid is Ms. Carol Yanakakis. It must be remembered that from 1975-1977 there were two full-time OCAP professionals working at Lynn English. There now is a guidance counselor who sporadically attends to the

CIC and one City Aid who works for three hours per day. This difference in manpower alone has reduced the efficiency of the operation markedly. Mr. Tatle reports that approximately eighty percent of the student body know about the CIC. Career education activities this year included a career conference, visitations of career speakers (approximately six in 1977-1978), some career education activities in the classrooms (no specific data was available), and student use of the CIC.

Evaluation:

The loss of the professional CCAP staff has reduced the operation of the career education program at Lynn English significantly. There is little or no leadership for the improvement of career education and the effectiveness of the CIC has been lost.

Breed Junior High School

The Guidance Team Leader is Ms. Muriel DeLaney; Title I Aids, Ms. Carolyn Walcott and Ms. Pearl Brown. Breed Junior High moved into a new building in October 1977. With all the problems that this entails, career education activities got off to a slow start. The center opened late in the school year and there has not been a student orientation to the CIC.

Evaluation:

Although there is much to be done, both the faculty and the guidance team leader seemed enthusiastic. Most of the leadership is coming from the Title I Aids since Guidance feels somewhat overwhelmed with a 600/1 load. The only indication of career education in the classrooms was in ninth grade Civics and some minor amounts of

information used in Health. Both of these interests preceeded CCAP's influence.

Cobbert Junior High School

The Guidance Team Leader is Ms. Elizabeth Sherry; Title I Instructor, Mr. Peter Drivas; City Aid, Ms. Joan Barceleau. Located in the worst possible building imagineable, the CIC at Cobbert is a beehive of activity. Cobbert serves as the bilingual junior high and all the posters and activities in the CIC are in Spanish as well as in English. All the seventh grades have been oriented to the CIC and 40 percent of the other students have used the facility. There is little guidance leadership and no teacher involvement.

Evaluation:

Peter Drivas is a dynamo. His energy and enthusiasm permeates the center. Many students were using the center during our visit. Workshops and community/industry activities are planned. One must be enthusiastic about the possibility of career education happening at Cobbert.

Eastern Junior High School

The Guidance Team Leader is Mr. Dan Mosco; Title I Instructor, Ms. Pat McCuiness; Title I Aid, Ms. Anna Sears; City Aid, Ms. Barbara Brown. This CIC has a poor physical layout. It is small and only useable by a few students at a time. However, 80 percent of the students have been oriented to the center and there is guidance and aid enthusiasm for career education.

Mr. Mosco sees career education as an important part of his guidance job and therefore gives the center high priority of his time.

Evaluation:

There is leadership and enthusiasm here. The center is well organized and career education activities are perceived as being important. The CIC is well staffed and used.

GENERAL EVALUATION

Career education has suffered at Lynn English High School. Most gains that were made in 1975-1976 and in 1976-1977 have been lost. The CIC staggers along, open only from 9:00-12:00. There is little dynamism or evidence of permanence for much career education. Mr. Tatle who is interested in career education finds little support within the faculty or other guidance personnel. The City Aid is competent but not outgoing or dynamic. The outlook in the junior high schools is quite the opposite. With the leadership of OCAP, the support of the superintendent's office, and Title I money for staffing purposes, much has happened. There are functioning CICs in each school. Many students are using them and the direction seems to be that more will do so in the future. The important component in each school is a single enthusiastic leader. It does not seem to make any difference whether the leadership comes from the guidance office or from the Aids. Where there is leadership interesting things are happening. OCAP's influence has been in the proposing and developing of the team leader concept, in the training of the team leaders and Aids (each has been involved in a 16-week

course), in helping to supply the CIC centers with materials, and providing technical assistance when necessary. The city of Lynn has made a contribution in hiring the City Aids and in providing the organizational leadership necessary to begin the project. The evaluators believe that there is no question that career education will grow at the junior high level, but it is questionable whether much will be sustained at the high school level.

KING PHILIP

This section is a status report on the career education activities at King Philip Regional High School. The tables have been organized by topical categories. The tables show the number of respondents to each question at the time of initial surveying, May 1977, which is the end of the second year of the project, and subsequent surveying, December 1977. The data was calculated only for those individuals for whom pre and post information was available. Two conclusions can be drawn from the data: 1. The December figures can be construed as reflecting change from May. However, because OCAP delayed the initial assessment to the end of the second year of the project, no true portrayal of change attributable to this project overall can be gained from this data alone. 2. The reader, because of the nature of some survey questions, can assume that the December percents also reflect cumulative change related to OCAP's initiatives.

EVALUATION OF PROFESSIONAL STAFF REVIEW
KING PHILIP REGIONAL HIGH SCHOOL

Description of the Population

Only individuals on whom data was available from both the May and December 19[illegible]7 survey administrations were used in this report. There were 33 academic teachers in this sample (56 percent male and 42 percent female). They were an experienced group, two-thirds having between 6 and 20 years of teaching experience. Sixty-four percent had Bachelor's and nineteen percent had Master's degrees. There were 23 vocational teachers (50 percent male and 50 percent female). This group was relatively new to teaching, with forty-five percent having less than five years of experience. Forty-five percent had less than a Bachelor's degree. There were seven department heads (57 percent male and 43 percent female). Eighty-six percent of this group had eleven years or more teaching experience and eighty-six percent had a Master's degree or higher. There were five counselors (60 percent male and 40 percent female). All had between six and twenty years of teaching experience and all had a Master's degree.

Involvement With OCAP Personnel

The King Philip staff knew about OCAP. OCAP's greatest contact and assistance overall were with the department heads and guidance counselors. From May to December 1977 greater OCAP involvement with academic teachers was noticeable. About one-half of the staff at King Philip stated OCAP was of personal assistance to them.

Elimination of Sex Role Bias

Generally speaking little was accomplished in this area overall. A workshop was held in the second year of the project with little carry over being noted in the classrooms. Sixty percent of the vocational teachers noted that the school system currently has a policy to expand opportunities for females into non-traditional work roles.

LEA Policies and Commitment to Career Education

The King Philip staff is not uniformly aware of school policies as they pertain to career education. Definitive direction to implement career education has not been received from the school administration. Only three out of five academic teachers and counselors were aware that the school had a career education plan. About a third of the academic teachers and department heads indicated that they were involved with a vocational teacher about integrating career information with their subject matter. However, seventy-eight percent of the vocational teachers indicated meeting with other vocational teachers in this regard. Less than half of all the teachers indicated they were working with counselors to implement career education. Only approximately forty percent of the teachers indicated having formal instruction on how to develop career education materials into their lesson plans. Since May teachers significantly became more aware of the school procedures of arranging for and using community resources. Since the school district has no bilingual students, this survey question was not applicable.

Staff Knowledge on Career Education Concepts

The faculty can be viewed as becoming more knowledgeable and more comfortable with career education, but room for improvement remains. Forty-six percent of the academic teachers and about seventy percent of the vocational teachers and department heads stated they sufficiently understand occupational information to use it in their area of expertise. Since May the academic teachers have become significantly more aware as to how to use community resources. About seventy percent of the teachers understand the career cluster concept. Fifty-five percent of the academic teachers and about seventy percent of the vocational teachers and department heads believe they sufficiently understand the career development process. The majority of the King Philip faculty indicated they had developed ways to use career information in their own settings. With the exception of vocational teachers, most of the King Philip faculty indicated they did not always use career education strategies and materials in their classrooms.

Career Information Center (CIC)

Most of the faculty have been oriented to the CIC and have actually visited the center. In the eight months since the initial surveying about twenty percent more teachers developed their own career education activities that used materials from the CIC. Overall, currently a little less than one-half of the faculty have developed on their own activities that use materials from the CIC. Between sixty and seventy percent of the King Philip staff use career information in their positions. Since the beginning of the year about one-quarter of the teaching staff overall are using

multiple pieces of material from the CIC.

Attitudes About Career Education and Its Delivery

The faculty is very supportive of career education. Over eighty percent believe that career information and awareness should be an integral part of a school curriculum and encourage its application wherever practical. However, ninety percent of the teachers felt that they needed help to use materials from the CIC and how to incorporate information into their class, and about fifty percent of the teachers felt the Guidance Department adequately supplied them with career materials and information.

Attitudes About OCAP

The total faculty of King Philip was positive of OCAP and said that OCAP helped them in better understanding student career development and stated that OCAP should be continued.

OCAP's Impact

About one-half of the faculty, as a result of OCAP, indicated that they have become aware of more occupations and career information in their respective instructional areas, are better able to utilize this information, and feel that the administration supported the OCAP project.

Perceptions Of the Effective Career Education Roles And Faculty Delivery Of Those Functions

Two questions were asked: Who do you feel has the prime responsibility for the implementation of each of sixteen career education functions - administrators, teachers, counselors or students? How would you rate each of the sixteen areas as to their effectiveness?

This part of the report might be considered by some as the most interesting or the most revealing of the data. First, only one of the sixteen career education functions was not seen as anyone's prime responsibility, i.e., job placement. Only a few of the total faculty saw these sixteen functions as inappropriate to career education. The counselors changed their perceptions the most on post-surveying as to whether these sixteen functions were indeed career education functions. No significant numbers of faculty perceived students as having a role in being responsible for any of the functions. The results do highlight possible poor communication in role functions among different staff. Department heads and all teachers were uncertain whose responsibility it was to develop career education materials. Counselors and teachers overlap in their belief as to whose function it was to expand values, teach decision making, teach students to use career education materials, and instruct how one goes about filling out a job application. The non-resolvement of such issues can be detrimental to an organization.

Overall there was considerable stability on post-surveying of the academic teachers' assignment of career education functions to different staff members. They most frequently saw themselves as involved in relating course material to jobs, teaching students to fill out job applications, helping students expand their talents and values, rewriting curriculum to involve career education concepts, and helping students learn decision making.

The academic faculty overall became more aware of what career education functions were occurring in their school on post-

surveying and noted some areas in which they perceived an improvement, i.e., helping students assess their ability and interests, developing a systemwide approach to career education, developing career education awareness within their school, rewriting curriculum to involve career education concepts, and developing career education materials. Notable is the considerable number of faculty who responded "Don't Know" when queried as to their perceptions of the effectiveness of various functions being delivered to students with a resultant conclusion by the investigators that the academic faculty were not knowledgeable regarding many career education activities at King Philip. However, the category of "Don't Know" showed a decrease on post-surveying and represents a good improvement from eight months previous.

The vocational teachers answered in a very similar way to the academic teachers. They saw themselves involved in the same career education functions as noted above by the academic teachers and rated mostly the same areas as their teaching counterparts as effectively being accomplished. There is likewise a lack of awareness by many faculty of the status of career education within the school.

Generally speaking, the department heads became more aware of the functioning of career education with their school system on post-surveying; however, there still are areas of uncertainty in the minds of these administrators regarding the effectiveness of accomplishment of about fifty percent of the functions typically attributed to career education. This phenomenon is bound to create confusion among the teaching staff. It is also systematic of poor communication patterns among the leadership of this school

system. The department heads saw their prime responsibilities as: maintaining/staffing the CIC, working to eliminate sex role bias, expanding career education activities for minorities, developing a systemwide approach to career education, developing career education awareness within their school, and maintaining career education programs after OCAP leaves. The administrators' and teachers' role descriptions were very compatible with each other's perception of their respective roles, i.e., administrators assigned to faculty suitable roles while faculty maintained appropriate teaching functions and designated management functions to administrators.

The department heads only saw three career education areas as being effectively accomplished at this time, i.e., maintaining/staffing the CIC, developing a systemwide approach to career education, and developing a career education awareness within their school. Five functions in which they saw considerable improvement since pre-testing were: relating course materials to jobs, teaching students to use career education materials, helping students expand their talents and values, developing a systemwide approach to career education, and rewriting curriculum to involve career education concepts.

The counselors apparently were and currently are the most aware of what is happening in respect to career education at King Philip. They see their role as including: helping students assess their abilities and interests, arranging interviews for prospective job candidates, helping students expand the awareness of their talents and values, and helping them learn decision making skills.

They perceived more improvement than any other group in the delivery of the career education functions this year and rated the most functions as being effectively accomplished.

A. CURRICULUM EXPERIENCE

Took A Course In Curriculum Development

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N*	%**	N	%	N	%	N	%
May	14	42	5	22	3	43	4	80
Dec	19	58	6	26	4	57	5	100

Had Other Than Coursework Training In Developing Curriculum Materials

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	13	39	8	36	4	57	3	60
Dec	20	61	9	39	6	86	3	60

Had a Course Or Workshop In Developing Career Education Curriculum Materials

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	6	18	8	36	1	14	3	60
Dec	10	31	10	44	2	29	4	80

B. INVOLVEMENT WITH OCAP PERSONNEL

Attended a Meeting Where OCAP Project Was Presented

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	25	76	17	74	7	100	5	100
Dec	30	91	20	87	7	100	5	100

Took An OCAP Course

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	6	18	9	39	2	29	4	80
Dec	8	25	10	46	3	50	4	80

*N represents actual number of respondents. December data includes May data.

**Percents are based on actual number reporting. Some individuals did not respond to every question.

Had An Individual Conference With OCAP Personnel

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	13	39	8	36	6	86	5	100
Dec	20	61	9	39	6	86	5	100

Was Present At a Department Meeting Where OCAP Personnel Were Involved

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	19	58	11	48	4	57	5	100
Dec	23	70	15	65	5	71	5	100

OCAP Was Of Personal Assistance To Me

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	11	33	7	31	4	57	5	100
Dec	17	55	8	36	7	100	5	100

Had More Than One Meeting Where Activities Were Crganized By OCAP

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	17	52	9	39	4	57	5	100
Dec	23	70	11	48	6	86	5	100

C. ELIMINATION OF SEX BIAS

Attended A Workshop On Sex Role Bias

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	12	36	4	18	0	0	5	100
Dec	12	36	6	26	0	0	5	100

Been Involved In Using Strategies To Eliminate Sex Role Bias

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	1	3	2	8	0	0	1	20
Dec	4	13	6	26	1	14	3	60

There Is a School Policy Statement To Expand Non-Traditional Roles

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	5	15	7	31	0	0	1	20
Dec	12	36	14	61	1	14	3	60

D. IEA POLICIES AND COMMITMENT TO CAREER EDUCATION

Our School Has a Plan For Implementing Career Education

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	13	39	15	65	2	29	0	0
Dec	20	61	17	74	5	83	3	60

Been Involved In a Meeting With Vocational Teachers Concerned With Relating Subject Matter With Career Information

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	6	18	13	59	0	0	2	40
Dec	11	33	18	78	2	29	2	40

The School Has Career Education Programs For Bilingual Students

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	0	0	3	13	0	0	0	0
Dec	0	0	3	13	0	0	0	0

The School Has Procedures For Arranging Use Of Community Resources

	Acad.Teacher		Voc.Teacher		Dept. Head		Counselor	
	N	%	N	%	N	%	N	%
May	5	15	8	36	2	29	1	20
Dec	17	57	16	73	4	57	3	60

Had Formal Instruction To Include Career Education Materials Into My Lesson Plans

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	8	25	7	31	2	29	2	40
Dec	13	42	9	39	4	57	3	60

In My Building Counselors And Teachers Work Together To Implement Career Education

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	6	18	8	36	1	14	3	60
Dec	14	42	11	48	4	67	4	80

E. STAFF KNOWLEDGE ON CAREER EDUCATION CONCEPTS

Sufficiently Understand Occupational Information Within My Area Of Expertise To Use It

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	13	39	15	68	4	57	5	100
Dec	15	46	15	68	5	71	5	100

Know How To Use Community Resources For Instruction

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	12	36	11	48	3	43	3	60
Dec	19	59	17	74	5	71	4	80

Understand The Concept Of Career Clusters

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	16	49	13	59	4	57	5	100
Dec	22	67	16	70	6	86	5	100

Sufficiently Aware Of The Career Development Process To Use It In My Work With Students

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	14	42	13	59	4	57	5	100
Dec	17	55	16	70	5	71	5	100

Developed Ways To Use Career Information In My Own Setting

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	15	46	16	70	6	86	4	80
Dec	20	61	19	83	7	100	5	100

Have Always Used Career Education Strategies/Materials In My Classes

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	9	27	12	55	1	14	2	40
Dec	11	33	16	70	1	14	2	40

F. CAREER INFORMATION CENTER (CIC) AND USE OF CAREER EDUCATION MATERIALS

Aware Of And Use The CIC

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	7	21	3	13	2	29	4	80
Dec	9	27	4	18	6	36	4	80

Visited CIC

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	28	84	18	78	7	100	5	100
Dec	30	91	19	83	7	100	5	100

Been Oriented To CIC

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	20	61	13	59	6	86	5	100
Dec	25	78	15	65	6	86	5	100

Developed Activities On My Own That Use Materials From CIC

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	9	27	6	26	3	43	3	60
Dec	14	44	10	46	4	57	4	80

Use Career Education Information In My Position

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	16	49	14	61	5	71	5	100
Dec	19	59	16	70	5	71	5	100

Since The Beginning Of The School Year I Have Used Over Two Pieces Of Material From The CIC

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	7	21	4	18	3	43	4	80
Dec	8	24	6	26	5	71	4	80

G. ATTITUDES ABOUT CAREER EDUCATION AND ITS DELIVERY

Agree That Teachers Need Help To Use Materials From CIC And Incorporate Into Classroom Activities

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	30	91	20	87	7	100	3	60
Dec	31	94	20	87	7	100	5	100

Always Felt Career Information And Career Awareness Are An Integral Part Of All School Activities

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	25	76	21	92	7	100	4	80
Dec	29	88	22	96	7	100	5	100

The Guidance Department Adequately Supplies Career Materials And Information

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	10	31	11	48	4	57	3	60
Dec	13	42	13	59	6	86	4	80

Feel Career Education Should Be Part Of The Curriculum And Teachers Should Be Encouraged To Implement It

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	24	72	21	91	6	86	5	100
Dec	26	84	21	91	6	86	5	100

H. ATTITUDE ABOUT OCAP

OCAP Has Been a Real Help In Better Understanding Student Career Development

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	18	56	19	83	4	57	5	100
Dec	25	76	20	91	6	86	5	100

Had Positive Attitudes Toward Student Career Development But OCAP Strengthened Them

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	24	72	20	87	6	86	4	80
Dec	26	81	21	91	6	86	5	100

OCAP Is An Important Program And Should Be Continued

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	29	88	22	96	6	86	5	100
Dec	30	91	22	96	6	86	5	100

OCAP Offers Important Programs And Should Be Continued After Federal Dollars Cease

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	26	81	21	96	6	86	5	100
Dec	30	91	21	96	6	86	5	100

I. OCAP'S IMPACT

As a Result Of OCAP, I Became Aware Of More Occupations Which Relate To My Own Area Of Expertise

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	13	39	7	31	3	43	1	20
Dec	18	56	9	41	4	57	1	20

OCAP Helped Me To Locate Career Information About Jobs

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	17	52	8	36	5	71	4	80
Dec	20	61	12	55	5	71	4	80

As a Result Of OCAP, I've Used More Career Information In My Classes

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	10	31	8	36	4	57	3	60
Dec	16	49	10	44	6	86	3	60

As a Result of OCAP, I Learned More About How To Use Career Education In My Classes

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	12	36	10	44	3	43	2	40
Dec	19	58	11	48	4	57	2	40

Feel The Administration Is Supportive Of OCAP

	Acad.Teacher		Voc.Teacher		Dept.Head		Counselor	
	N	%	N	%	N	%	N	%
May	10	31	7	31	3	43	2	40
Dec	18	56	10	46	7	100	2	40

PERCEPTIONS OF THE EFFECTIVE CAREER EDUCATION ROLES AND FACULTY DELIVERY OF THOSE FUNCTIONS

Percent Of Academic Teachers Believing What Staff Have The Prime Responsibility For Various Career Education Functions

	Administrator		Teacher		Counselor		Student	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	4	8	4	0	63	67	26	22
Relate course to Jobs	7	8	67	81	26	11	0	0
Teach to use CE materials	2	6	46	42	50	50	2	0
Help students assess ability, interest	0	0	22	28	78	72	0	0
Job application	0	0	57	53	41	44	2	3
Job interviews	4	3	4	3	74	81	17	14
Staff CIC	61	72	0	0	37	28	2	0
Help students exrand values	2	0	61	50	35	47	2	0
Eliminate sex bias	52	67	35	22	4	8	9	3
Career education for minorities	59	72	2	3	28	22	9	0
Develop career ed. systemwide	89	92	0	0	9	8	2	0
Develop career ed. within school	61	61	15	11	24	25	0	0
Rewrite curriculum	35	36	54	56	7	6	0	0
Develop career ed. materials	37	42	17	19	46	36	0	3
Learn dec.making	0	3	72	75	24	22	2	0
Maintain career ed.	54	64	2	8	41	25	2	3

Percent Of Academic Teachers' Perception Of The Effectiveness Of Various Career Education Functions At King Philip

	Effectively Accomplished		Poorly Accomplished		Function Doesn't Apply		Don't Know	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	15	14	2	14	4	14	72	56
Relate course to Jobs	28	31	13	25	2	6	50	39
Teach to use CE materials	41	50	24	22	0	3	28	22
Help students assess ability, interest	33	44	17	22	0	3	39	31
Job application	35	44	13	17	2	3	44	33
Job interviews	20	19	4	11	0	8	70	58
Staff CIC	67	72	4	11	0	6	22	11
Help students exrand values	41	44	17	31	0	3	35	19
Eliminate sex bias	20	19	15	25	4	11	52	42
Career education for minorities	7	11	0	6	26	22	61	53
Develop career ed. systemwide	13	28	22	28	8	6	50	36
Develop career ed. within school	52	69	17	19	0	6	24	3
Rewrite curriculum	15	25	15	25	15	6	48	39
Develop career ed. materials	37	58	11	17	2	0	44	22
Learn dec.making	35	36	20	31	2	3	37	31
Maintain career ed.	7	8	2	6	9	25	72	53

Percent Of Vocational Teachers Believing What Staff Have The Prime Responsibility For Various Career Education Functions

	Administrator		Teacher		Counselor		Student	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	4	5	24	20	52	55	16	20
Relate course to Jobs	12	10	68	75	12	15	4	0
Teach to use CE materials	4	5	40	35	52	55	0	0
Help students assess ability, interest	0	0	24	20	76	80	0	0
Job application	4	5	72	65	24	30	0	0
Job interviews	4	10	20	25	60	60	16	5
Staff CIC	76	80	4	0	20	15	0	0
Help students exrand values	0	5	72	70	28	25	0	0
Eliminate sex bias	52	65	24	30	12	5	4	0
Career education for minorities	64	70	0	0	36	30	0	0
Develop career ed. systemwide	86	80	0	0	12	15	0	0
Develop career ed. within school	44	75	24	5	32	15	0	0
Rewrite curriculum	16	15	76	75	4	5	0	0
Develop career ed. materials	32	20	24	35	44	45	0	0
Learn dec.making	0	10	68	75	32	10	0	0
Maintain career ed.	48	60	12	15	40	20	0	0

Percent Of Vocational Teachers' Perceptio Of The Effectiveness Of Various Career Education Functions At King Philip

	Effectively Accomplished		Poorly Accomplished		Function Doesn't Apply		Don't Know	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	28	25	16	20	8	0	40	50
Relate course to Jobs	60	60	12	20	4	0	16	20
Teach to use CE materials	36	45	20	30	8	0	28	25
Help students assess ability, interest	36	45	16	30	0	5	32	20
Job application	36	40	4	20	0	0	48	35
Job interviews	24	30	16	15	4	0	44	50
Staff CIC	76	85	0	0	4	0	12	10
Help students exrand values	48	40	4	30	0	0	36	25
Eliminate sex bias	20	20	36	40	8	5	24	35
Career education for minorities	4	5	16	5	8	20	48	65
Develop career ed. systemwide	28	35	16	20	4	10	36	30
Develop career ed. within school	64	60	12	20	0	0	4	20
Rewrite curriculum	52	40	12	15	0	5	24	35
Develop career ed. materials	68	55	8	10	0	0	12	30
Learn dec.making	52	35	8	30	0	0	20	30
Maintain career ed.	16	15	12	10	0	0	52	70

Percent Of Department Heads Believing What Staff Have The Prime Responsibility For Various Career Education Functions

	Administrator		Teacher		Counselor		Student	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	0	0	0	0	88	57	13	43
Relate course to Jobs	0	0	88	86	13	14	0	0
Teach to use CIC materials	0	0	50	43	38	57	13	0
Help students assess ability, interest	0	0	50	29	50	71	0	0
Job application	0	0	38	43	50	43	13	14
Job interviews	0	0	0	0	100	57	0	43
Staff CIC	100	86	0	0	0	14	0	0
Help students exrand values	0	0	75	86	25	14	0	0
Eliminate sex role	88	85	13	14	0	0	0	0
Career education for minorities	88	85	13	0	0	14	0	0
Develop career ed. systemwide	100	100	0	0	0	0	0	0
Develop career ed. within school	88	85	13	14	0	0	0	0
Rewrite curriculum	0	14	100	86	0	0	0	0
Develop career ed. materials	50	43	38	14	13	29	0	0
Learn dec.making	0	0	100	86	0	14	0	0
Maintain career ed.	75	100	25	0	0	0	0	0

Percent Of Department Heads' Perception Of The Effectiveness Of Various Career Education Functions At King Philip

	Effectively Accomplished		Poorly Accomplished		Function Doesn't Apply		Don't Know	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	0	14	13	0	0	0	75	86
Relate course to Jobs	25	43	50	43	0	0	25	14
Teach to use CIC materials	13	57	38	0	0	0	50	43
Help students assess ability, interest	50	43	25	14	0	14	25	29
Job application	25	29	13	0	0	0	63	71
Job interviews	0	0	13	14	0	0	75	86
Staff CIC	100	85	0	0	0	0	0	14
Help students exrand values	25	43	25	14	0	0	38	43
Eliminate sex role	0	29	13	14	13	0	63	57
Career education for minorities	0	14	0	0	38	29	50	57
Develop career ed. systemwide	25	71	50	29	13	0	13	0
Develop career ed. within school	75	71	13	14	0	0	13	14
Rewrite curriculum	13	57	38	14	13	0	38	14
Develop career ed. materials	50	43	25	29	0	0	25	14
Learn dec.making	13	14	25	14	0	0	38	57
Maintain career ed.	0	0	13	29	13	14	50	43

Percent Of Counselors Believing What Staff Have The Prime Responsibility For Various Career Education Functions

	Administrator		Teacher		Counselor		Student	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	0	0	20	0	40	80	40	20
Relate course to Jobs	0	0	80	80	20	20	0	0
Teach to use CE materials	0	0	0	60	100	40	0	0
Help students assess ability, interest	0	0	0	0	100	100	0	0
Job application	0	0	80	80	20	20	0	0
Job interviews	0	20	0	0	60	60	20	20
Staff CIC	80	60	0	0	20	40	0	0
Help students exrand values	0	20	20	0	80	80	0	0
Eliminate sex bias	80	80	20	20	0	0	0	0
Career education for minorities	80	80	0	20	0	0	20	0
Develop career ed. systemwide	100	100	0	0	0	0	0	0
Develop career ed. within school	80	80	20	20	0	0	0	0
Rewrite curriculum	40	80	60	20	0	0	0	0
Develop career ed. materials	40	60	20	0	40	40	0	0
Learn dec.making	0	20	20	20	80	60	0	0
Maintain career ed.	100	100	0	0	0	0	0	0

Percent Of Counselors' Perception Of The Effectiveness Of Various Career Education Functions At King Philip

	Effectively Accomplished		Poorly Accomplished		Function Doesn't Apply		Don't Know	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Job placement	40	40	0	20	40	20	0	20
Relate course to Jobs	0	40	40	20	0	0	60	40
Teach to use CE materials	60	80	20	20	0	0	20	0
Help students assess ability, interest	60	80	0	0	20	0	20	0
Job application	60	60	20	0	0	0	20	40
Job interviews	0	20	40	20	40	40	20	20
Staff CIC	80	80	0	20	0	0	20	0
Help students exrand values	40	80	0	0	40	0	20	0
Eliminate sex bias	0	20	20	40	40	20	40	0
Career education for minorities	20	0	0	40	60	20	20	0
Develop career ed. systemwide	0	80	60	0	20	0	20	0
Develop career ed. within school	40	80	60	0	0	0	0	0
Rewrite curriculum	0	60	20	20	40	0	40	0
Develop career ed. materials	20	80	40	0	0	0	40	0
Learn dec.making	20	20	40	20	40	20	0	0
Maintain career ed.	0	20	0	20	100	0	0	0

THE CAREER INFORMATION CENTER AND ITS EFFECT ON STUDENT CAREER AWARENESS AND KNOWLEDGE

The Third Party Evaluators Report
Of The
Third Year
Of The
Occupational Access Competence Project (OCAP)

June 1978

PURPOSE: To assess what impact the Career Information Center (CIC) has in relation to increasing a greater awareness of the number of jobs and occupational knowledge.

The CIC in OCAP's model had a central focus in infusing career education into a school. Specific effects of the CIC on students were studied.

THE CAREER INFORMATION CENTER AND ITS EFFECT ON STUDENT CAREER AWARENESS AND KNOWLEDGE

Rationale

The CCAI implementation model made the Career Information Center (CIC) a central focus for a majority of its infusion activities. CCAI oriented seventy-five percent (N=51) of the King Philip school staff to the CIC through actual visits to the facilities. And as of December 1977, sixty-five percent (N=44) of the King Philip school staff (figures are from responses to the Professional Staff Survey) indicated that they were using the CIC. The purpose of this study then was to assess what role the CIC served in relation to CCAI's objectives to increase career awareness, to expand student exploration of non-traditional career options, and to increase occupational knowledge.

Design

The population chosen to study was the entering 1977 ninth grade class of King Philip to attempt to control for treatment effect. In early October 1977 these students were surveyed as to what three occupations they were interested in as possible choices for life work and tested as to their knowledge about each of their stated choices. A total score was obtained for the eight areas of knowledge assessed: major duties and responsibilities of the job, the common work setting, place of employment, abilities and personal qualities typical of the job, educational requirements,

occurational titles as possible career options (See Appendix C). There were eighteen titles listed on post-surveying which had not been cited on pre-surveying and additionally five occupations which were researched in the CIC but not listed in either pre or post-surveys as possible life work. Cumulatively then these ninth grade students are aware of more jobs than they list as possible career goals. This data can be compared to the previous entire male ninth grade population of 1976 (N=131) which listed in total only sixty-one occupational titles.

The females (N=37) on pre-surveying listed fifty-three occupational titles and on their post-surveys noted sixty occupational titles (See Appendix D). There were twenty-three titles listed on post-surveying which had not been cited on pre-surveying and additionally ten occupations which were researched in the CIC but not listed in either pre or post-surveys as possible life goals. The entire ninth grade female population of 1976 (N=108) was surveyed as base line data for comparison purposes where they listed collectively sixty-two occupational titles.

What is the extent of this class's awareness of non-traditional career options? Males in this sample did not study nor indicate on pre or post-surveying any non-traditional occupations. Females, however, listed thirteen non-traditional occupations as possible career goals. Additionally, six non-traditional occupations, all of professional status, were researched in the CIC but not chosen as possible career options. Seven non-traditional occupations were listed on pre-testing but not listed on post-testing.

job outlook, any special licenses or certificates required, and average salary. The answers to these knowledge areas were obtained from the Occupational Outlook Handbook (1976-1977 Edition), U. S. Department of Labor. In early December 1977 the students were retested using the same survey (Appendix A).

The treatment for these students was the varied activities of the grade 9 instructional staff and student visits to the CIC to peruse, explore, and study occupational information as well as interact with the Career Resource staff member providing leadership to the CIC. Each student was asked when he/she visited the CIC to indicate the occupations he/she investigated. The form was developed in the Spring of 1977, field tested as well as analyzed for a preliminary examination of the results (See Appendix B). The records available to the investigators indicated that no student went to the CIC more than once.

Three questions were addressed: What is the extent of this ninth grade's career awareness of occupational titles? To what extent is this ninth grade class aware of and investigating non-traditional career options? And, does the use of the CIC and a grouping of varied career activities bring about an increase in occupational knowledge?

Results

What is the extent of the class's awareness of occupations? Only subjects on which pre-post testing was available and who used the CIC are included. The males (N=38) on pre-surveying listed 63 occupational titles and on their post-surveys noted fifty-nine

Did this sample's occupational knowledge increase within this approximate two-month period? When the difference between the means for correlated data was computed significant differences were found. For the males ($\tilde{Z}$=-1.64) it is suspected they did not attend to the task, resulting in decreased performance on post-testing. For the females (N=35) who used the CIC mean scores on post-testing showed significantly greater knowledge about occupations ($\tilde{Z}$=4.95). A smaller sample of females (N=20) who did not use the CIC were examined and also showed greater knowledge about occupations ($\tilde{Z}$=4.42).

Table 1

Pre and Post Mean Scores On The Occupational Knowledge Test

	Males (N=35)	Females[1] (N=35)	Females[2] (N=20)
Pre $\bar{X}$	9.5	6.4	7.5
Post $\bar{X}$	8.8	8.4	8.7
$\tilde{Z}$ Score	-1.64	4.95	4.42

Females[1] = Students using the CIC

Females[2] = Students not using the CIC

Conclusions

The results of this study suggest the CIC facilitates greater awareness of jobs; for females, permits a means for their exploring non-traditional work roles and contributes to females increasing their occupational knowledge. Students entering King Philip Regional High School have greater awareness of occupational titles if you use gross tally counts of occupations for the thirty-seven male and thirty-eight female students studied in 1977 in comparison

to samples of over one hundred for both sexes in 1976. Considerable career exploration was occurring for the students studied as evidenced by the addition and deletion of new career options cited as possible future occupational goals. The attainment of new occupational knowledge was not systematic. A more structured approach to the examination of occupational information would prove more beneficial.

APPENDIX A

(Occupational Competence Access Project)

OCCUPATIONAL KNOWLEDGE ASSESSMENT

Part II

Name _____ Grade _____ Date _____

80. From the abilities listed in questions 68 through 79 of Part I, list what you feel are your three best abilities. (The abilities you pick do not have to be your strongest abilities.)

_____

_____

_____

81. On the following lines list three occupations that interest you as possible future careers:

_____

_____

_____

Now answer the questions on the attached sheets concerning each of your occupational choices.

Name _____

Occupation #1 _____

1. List the major duties and responsibilities involved in this occupation.

_____

_____

2. Select the most common work setting where people perform this occupation.

____ indoors

____ outdoors

____ both

3. Where do most of the people in this occupation work? (Check the most suitable.)

____ rural area

____ urban area (city and suburbs)

____ both

4. List the abilities and personal qualities a person must have to do this job.

_____

_____

5. Select the educational requirements necessary to enter this occupation.

____ no preparation needed; on-the-job training is usually provided

____ graduation from high school

____ one year specialized training after high school graduation

____ two years of college training

____ four years of college training

Name _____

Occupation #2 _____

1. List the major duties and responsibilities involved in this occupation.

_____

_____

2. Select the most common work setting where people perform this occupation.

____ indoors

____ outdoors

____ both

3. Where do most of the people in this occupation work? (Check the most suitable.)

____ rural area

____ urban area (city and suburbs)

____ both

4. List the abilities and personal qualities a person must have to do this job.

_____

_____

5. Select the educational requirements necessary to enter this occupation.

____ no preparation needed; on-the-job training is usually provided

____ graduation from high school

____ one year specialized training after high school graduation

____ two years of college training

____ four years of college training

Name _____

Occupation #3 _____

1. List the major duties and responsibilities involved in this occupation.

_____

_____

2. Select the most common work setting where people perform this occupation.

____ indoors

____ outdoors

____ both

3. Where do most of the people in this occupation work? (Check the most suitable.)

____ rural area

____ urban area (city and suburbs)

____ both

4. List the abilities and personal qualities a person must have to do this job.

_____

_____

5. Select the educational requirements necessary to enter this occupation.

____ no preparation needed; on-the-job training is usually provided

____ graduation from high school

____ one year specialized training after high school graduation

____ two years of college training

____ four years of college training

APPENDIX B

Name _____ Date _____

OCAP CIC STUDENT UTILIZATION QUESTIONNAIRE

Occupation(s) Investigated: _____

_____

_____

_____

_____

Grade Level ( ) 9th ( ) 10th ( ) 11th ( ) 12th

Sex ( ) M ( ) F

APPENDIX C

MALE POST OCCUPATIONS

accountant
actor
airplane mechanic
architect
artist
auto mechanic
auto sales
auto sales manager
bank teller
bicycle repair
carpenter
cartoonist
coast guard
computer inventor/worker
computer programmer/technician
construction
coroner
crop duster (flying)
dentist
doctor
draftsman
electrical engineer
electrician
engineer
fireman EMT
forest ranger
forester
heavy equipment operator
lawyer
machine operator
machinist
marine biologist
maritime academy
masonry
mathematician
mechanic
meteorologist
music
oceanographer
paramedic
photography
pilot
pilot, helicopter
pipe fitter
plumber
police
public service worker
radio sports broadcaster
real estate sales
reporter
sales
scuba diver
sports broadcaster
sports writer
teacher
train engineer
truck driver
TV broadcaster
veterinarian

APPENDIX D

FEMALE POST OCCUPATIONS

actress
advertising
*architect
artist
biologist
bookkeeper
*chef
*computer technician
cook
dance instructor
dancer
day care center
dental hygienist
dog pound attendant
*drafting
*electrician
file clerk
hairdresser
*horse trainer
housewife
interior decorator
*lawyer
librarian
licensed practical nurse
maid
*math technician
model
musician
obstetrician/gynecologist
*oceanographer
pediatrician
photographer
physical therapist
practical nurse
*pro athlete
psychologist
receptionist
registered nurse
reporter
sales
secretary
secretary, legal
secretary, medical
singer
social worker
*sports reporter
stenographer
stewardess
teacher
teacher, music
teacher, physical education
theatre
tour guide
travel agent
typist
*umpire
*veterinarian
waitress
writer
x-ray technician

Non-traditional occupations listed on pre-test

accountant
advertising manager
blaster
forester
physician
police
sports caster

Non-traditional occupations investigated at CIC

business owner
computer operator
manager
marine science
mathematician
mechanical engineer

*=non-traditional occupation

CAREER EDUCATION PROJECTS: SOCIAL STUDIES AND ENGLISH CURRICULUM PROJECTS AT KING PHILIP REGIONAL HIGH SCHOOL

The Third Party Evaluators Report
Of The
Third Year
Of The
Occupational Access Competence Project (OCAP)

June 1978

PURPOSE: To evaluate the effectiveness of two career education activities as perceived by students and teachers. This study selected two of the 23 activities developed by the faculty for evaluation in relation to their career education components.

CAREER EDUCATION PROJECTS: SOCIAL STUDIES AND ENGLISH CURRICULUM PROJECTS AT KING PHILIP REGIONAL HIGH SCHOOL

As part of the OCAP plan to infuse career education into the classrooms of King Philip Regional High School, two mini curriculum projects were undertaken - one in the English Department in "Communications and Media" and one in the Social Studies Department in "Community Resources and Government." Both were offered as credit electives. Both were to serve as models for other such course offerings to follow. Below is a brief description and evaluation of each.

Community Resources and Government

This was an elective course for sophomores developed by Ms. Clara Manteca and Mr. Connie Poulos. Two classes of 28 and 32 students were taught during the first semester (1977-1978) and one class of 36 students was taught the second semester. This course attracted both academic and vocational students, approximately one-third academic and two-thirds vocational. Briefly the course explores governmental jobs in local town and city government with the following objectives:

> Major goals for students to learn the following concepts: practical skills; ideas about the ways that local agencies are both necessary and influential in the lives and careers of everyone in the community; and career planning opportunities.

It is this last objective that makes the course unique and

different. Specific career objectives include: naming and describing the duties of six typical jobs in local government, evaluating career prospects in the area, and helping students formulate interest in their own career planning.

Evaluation:

Interviews with instructors Manteca and Poulos suggest that the course was successful from their perspective and will be taught next year. The students did accomplish the career objectives per the statement of the instructors, although no formal written evaluation was made of the accomplishment. The major success of the course is that it was well received by the students, as attested to by the fact that it created sufficient student interest to be offered in the second semester. A side effect not anticipated was the mix of academic and vocational students electing the course. In very few courses at King Philip Regional High School are vocational and academic students integrated. Both of the instructors were enthusiastic and felt OCAP made the course possible through the summer workshop that allowed it to be created.

The Third Party Evaluators' Evaluation

The Third Party Evaluators were supplied with copies of both curriculum projects to write assessment components. After a very detailed study of both curriculum units and the writing of a set of evaluation questions which proved unsatisfactory to ourselves, a consultation was sought with Dr. Robert N. Walker, Head of the Test Department and Editor for Ginn and Company.

He confirmed that the objectives from which we were deriving our questions were inadequate and reflected activities rather than desired outcomes. It was Dr. Walker's judgement that the real course objectives were yet unwritten and consequently criterion reference questions could not be determined.

While the evaluators considered the units better than average for locally produced curriculum material, their somewhat vague course objectives precluded detailed analysis of student outcomes. "A Model Procedure For Developing A Career Guidance Course And Assessing Its Outcome" was supplied to OCAP by The Third Party Evaluators.

Communications And Media Cluster Exploratory Unit

This course, developed by Edward Maloney, was offered first semester (1977-1978) as an elective and attracted 140 juniors and seniors. Five teachers were involved at times. The major thrust of the course was to produce slide and sound shows portraying certain careers. These objectives were broadened to include informational shows about school subjects. The following projects were proposed and begun: the move to the metric system in science, child care, vocational school majors, journalism, and a produce canning project for science. There were a number of career objectives for each of these projects, e.g., to assist the students understand the careers and also to assist the school in the teaching of certain careers. No projects were completed during the actual course time; however, the project portraying the vocational school courses for showing at

the junior high schools was about complete as of the April 1978 site visitation by a Third Party Evaluator. Other projects are in different stages of completion.

Evaluation:

An interview with Mr. Maloney indicated that the course was enthusiastically received; however, too many projects were attempted for the resources that the school had available. Some career implications of the project seem to have been lost in the production of the products of the course, i.e., the film shows. Mr. Maloney feels that the students did learn a lot about careers. Again, no formal evaluation of the career stage of the program was undertaken. OCAP provided the opportunity for the course outline to be developed and also for the funds for the film for the project. Without these assists it is questionable if the course would have been offered in its present form.

OCAP'S IMPLEMENTATION PROCESS MODEL AT KING PHILIP REGIONAL HIGH SCHOOL

The Third Party Evaluators Report
Of The
Third Year
Of The
Occupational Access Competence Project (OCAP)

June 1978

PURPOSE: To monitor the pattern and progress of career education activities being infused into a local school's curriculum.

For two years in this school district OCAP played an active role in initiating, planning, setting the stage for and implementing career education activities. During the third and last year of federal funding this study assessed the extent to which a local school assumed the leadership role for implementing career education while OCAP functioned in a supportive and resource role.

OCAP'S IMPLEMENTATION PROCESS MODEL
AT KING PHILIP REGIONAL HIGH SCHOOL

Rationale

One of the major goals of OCAP at King Philip over the three-year period has been to infuse career information into the regular classroom activities of the school. OCAP's approach was basically three pronged: (1) establish a Career Information Center (CIC) and orient the student body to its use, (2) increase guidance activities to facilitate career awareness and exploration, and (3) infuse career information into the course content of the school. After orienting the teachers to career education procedures through the OCAP course in 1975-1976 and 1976-1977, the next move was to provide leadership for actual projects to be designed and attempted. The department chairpersons were chosen as the vehicle for this leadership. Based upon the size of the OCAP staff and the size of the King Philip faculty and student body, there is a logic to this methodology of changing the responsibility for leadership. So, during the summer of 1977 the chairpersons attended a workshop where they prepared a "Career Education Planning Notebook" that outlined projects in each of five different areas that could be carried out by classroom teachers. Included in this study were the departments of Science, Social Studies, Student Services, Mathematics, and English.

Assessment Of The Design Model

In an attempt to evaluate the effectiveness of the process model the evaluators developed a longitudinal process evaluation. Each chairperson was requested to fill out a career activity weekly summary form (See Appendix A). The process evaluation monitored the flow of the types of involvements, the resources used, time line adherence, and recording obstacles to planning and implementation of stated goals and objectives over the period October-April, 1977-1978. These weekly summary forms were forwarded directly by the chairpersons to the evaluators and provide the statistical basis of this report. Each chairperson or representative was also interviewed twice during the year, first in early December to assess their progress to date and to check the feasibility of the evaluation plan and second in early April to incorporate their clinical evaluations of the Implementation Process Model and to assess in the perspective of these chairpersons the state of career education at King Philip Regional High School. The remainder of this section of the report is divided into three sections: A. An analysis of general departmental support for the project. B. A summary of the career activity weekly summary forms. C. A summary and synthesis of the above sections.

A. General Departmental Support

Perceived Responsibility:

Although outwardly all chairpersons were committed to the implementation process model and had been exposed to the same training workshop, it was evident a great difference in perceived

responsibility for implementation of career education existed during the year. These perceptions varied from one chairperson who really saw this as a mandate for implementation to a completely laissez-faire attitude of "if it happens, it happens." The general perception of these middle management personnel fell somewhere in between; however, the general conclusion of the chairpersons would have to be that this was not a project of prime importance. Comments such as when there was "time," "after we finished our regular work" permeated conversations with the evaluator concerning implementation. It should quickly be noted that the degree of perceived responsibility and priority given bears a positive and high correlation to the degree of implementation in which projects were attempted by each department. For example, the verbal commitments and subsequent performance of Mr. Poulos and the Department of Social Studies reflects both enthusiasm and performance.

Perceived Administrative Support:

In our interviews with department chairpersons different degrees of administrative support were reported. Most felt that there was verbal and documented support from the superintendent's office; however, many felt that this was not manifested in the day-to-day activities in the high school. There were reports that actual projects in career education were discouraged at the building principal's level because they "did not have anything to do with the curriculum." This perception of mixed or limited enthusiasm was grasped by some who were perhaps reluctant to begin as reason or rationalization for not giving career information

projects a high priority. For others this confusion of message did not seem to exist and they felt that administration was passively supportive.

Discussions with the superintendent and director of vocational education do not mirror this limited enthusiasm. Both voiced enthusiastic support of OCAP's achievements and enthusiastic endorsement of OCAP's implementation model. However, both admitted to limited expectations based upon their experience with other government funded projects. It was brought out that OCAP also provided an opportunity for the Superintendent to formulate and achieve objectives or curriculum change that were compatible with his own ideas. The evaluators concluded that there is some perceptual difference between teachers, chairpersons, and administrators concerning the involvement and desired achievement.

Time Pressures/Priorities:

The greatest perceived deterrent to greater involvement in the implementation of career education into the classrooms were the pressures on the time of the departmental chairpersons. In alsmost all cases we heard of the conflicts that chairpersons perceived themselves to be in over the allocation of their time for the different responsibilities of their position. Their "chairperson's time" also was lessened this year because of a drive to improve classroom attendance, the implementation of which fell mainly on the chairperson's shoulders. Chairpersons are allowed three periods a day for their administrative duties. One period, one-third of that time, was used for attendance monitoring. All concurred that this attendance problem was real

and again for some, it became the reason or rationalization for less activity to this project than might have been. Although no time analysis of the chairperson's activity day was undertaken, the unanimity of their perceived dilemnas and time conflict would lead one to believe that this is a real problem and that the chairperson's ability to organize and implement new programs is in part determined by the time that he/she is encouraged or required to spend on it. Some felt that more follow-up meetings with OCAP personnel throughout the year would have been useful; others felt that without continued stimulus from OCAP, projects such as these become lost and some felt that only through compensatory remuneration over and above one's basic salary would greater time allocations become available.

Reporting Consistencies:

A longitudinal survey was conducted over a period of 22 weeks of which two were removed for the snow emergency week and the February vacation. The maximum number of reports received could be twenty. The range of the number of reports actually received from each department varies from seven to twenty with a mean of thirteen. To be sure, one's compulsion toward accurate reporting is not always a clear reflection of one's enthusiasm or support. In this case it was verified by an on-site visitation that during the period where little or no reporting was done, little or no activity took place.

Personal Dimensions:

As has been pointed out in other paragraphs above, one of the major forces contributing to departmental support is the

individual personal commitment of the chairperson. OCAP served as a catalyst and a facilitator to develop career education procedures and a process. During the study period the implementation of that process seems to have been affected more by the personal commitment of each faculty member than by the involvement of the OCAP staff. (OCAP staff is limited here to John Post and Gregory Martin. Diane Hayes is perceived as school staff by the participants.) This personal commitment seems to be based on the specific persuasion of the faculty person and the degree to which career education has always been a factor of the curriculum in this faculty member's mind.

B. Activity Reports

As mentioned in the introductory paragraph, each departmental chairperson was requested to complete a career activity weekly summary form. These were mailed to the chairpersons at the beginning of each month with their names and the dates already entered and they were provided with self addressed, stamped envelopes for their return to the evaluator. The time per week necessary to complete the report would be estimated to be five minutes. The data is reported in summary form on the accompanying chart. The following paragraphs summarize that data. On the accompanying chart each cell represents the number of departments reporting that activity during that week. No report is recorded as no activity.

No Career Activity This Week:

With twenty possible reporting weeks and five possible entries

per week, the maximum number of entries would be 100. In summary form it suggests that if one combined all departments, career education was taking place 40 percent of the time. There were 60 reports of no activity during the period of this study. There is no question that this latter figure is influenced by the severity of the weather during the February period, by mid term examinations and semester courses ending and beginning again, and by vacation periods. For many reasons the momentum of the infusion process never really recovered after the February storm and the summary chart reflects little activity during February, March, and April.

Instruction:

This category describes the number of actual classroom instructional activities attempted by the combined departments. The number of reported activities was 23 or 35 percent of the possible instructional periods. Two departments ceased to report after the end of December. The reasons presented for their withdrawal from the monitoring process were vague, e.g., "no time," "never got around to it," "nothing to report."

Planning With Department Members:

This category reflects the number of times reported that the chairperson interacted with his/her designated staff concerning the implementation of career education material. The maximum number of interactions possible would be 65. Sixteen instances, or 25 percent, were reported.

Discussions With Other Faculty:

This category reports the number of instances that the departmental

Career Activity Summary
For Five Departments For Twenty Consecutive Weeks
King Philip Regional High School

	OCT	NOVEMBER	DEC	JANUARY	FEBRUARY	MARCH	APRIL	ACTUAL TOTAL REPORTS
A No Career Activity	*0	1 1 3 1	1 3	3 3 5 5 2	- 5 - 4	4 3 5 4	3 4	60
B Career Instruction	0	1 3 1 2	2 1	2 2 0 0 3	- 0 - 1	1 0 0 1	2 1	23
C Department Planning	5	3 1 0 0	1 2	1 1 0 0 0	- 0 - 0	0 2 0 0	0 0	16
D Faculty Discussions	2	3 1 1 2	2 0	1 0 0 0 0	- 0 - 0	1 0 0 0	0 0	13
E Administration Discussions	0	1 0 0 0	0 1	0 0 0 0 0	- 0 - 0	0 0 0 0	0 0	2
F OCAP Discussions	2	3 1 1 2	1 1	0 1 0 0 0	- 0 - 0	1 1 0 0	0 0	14
Number of Departments Reporting	5	5 4 4 4	5 5	3 3 3 3 3	- 3 - 2	3 3 2 2	2 1	65

A = No career activity this week	60/100**	or 40 percent
B = Career Instruction	23/65***	or 35 percent
C = Planning with Department Members	16/65	or 25 percent
D = Discussions with other Faculty	13/65	or 20 percent
E = Discussions with Administration	2/65	or 3 percent
F = Discussions with OCAP Staff	14/65	or 22 percent

* Each cell represents the number of departments reporting activity for that week.
** No report is evaluated as no activity. Since there were five departments and twenty reporting weeks, there were 100 possible reports.
*** 65 represents the actual total number of departments submitting reports during that period.

chairperson discussed career education projects with other members of the King Philip faculty other than his/her own staff. Using the same base, 13 such instances were reported, or 20 percent.

Discussions With Administration:

This category represents the number of times that the departmental chairpersons discussed career education projects with the administration of King Philip Regional High School or with the superintendent's office. The maximum number of interactions would be 65. Two instances, or three percent, were reported.

Discussions With Ocap Staff:

This category represents the number of times the departmental c hairpersons discussed career education in projects with members of the OCAP staff. The maximum number of interactions would be 65. Fourteen instances, or 22 percent, were reported. This figure could be viewed as an understatement for discussions with the chairpersons suggest that they did not perceive Diane Hayes, the administrator of the Career Information Center, as OCAP's staff.

C. Summary And Synthesis

Strengths:

There are many positive aspects of the career implementation process model. 1. All departments were involved in the infusion process and career activities in individual classrooms did result. All department chairpersons, the principal, and superintendent agreed that without OCAP's stimulus and facilities this would not have happened. 2. There were at least 23 projects reported.

Most of these developed from the career education planning notebook which was the result of the chairpersons' training workshop during the Summer of 1977. 3. All department chairpersons indicated that they would attempt more projects next year and would revise some of those that were not found to be effective by the teachers who used them.

Weaknesses:

Complete analysis, however, must report negative aspects to the infusion plan. 1. Based upon the number and percentage of discussions with department members, other faculty, and particularly administration, one would have to suggest that a small portion of the energies and activities of the department chairpersons was given over to sponsoring or facilitating these career education projects. As pointed out earlier, this situation varies tremendously from department to department. Of the 23 reported career activities, 12 took place in one department, Social Studies, and the other four departments accounted for only one, three, two, and five projects respectively. In essence we have a low productivity of career activities with the exception of one outstanding department. It also can be gleaned from the reporting chart that from the beginning of January through the end of April only nine career activities took place. After a relative surge of activities during November and December and early January, enthusiasm for career education projects diminished markedly. Factors such as weather, mid-term examinations, semester course changes, account for some of this lack of activity, but probably not all. 2. Although the involvement of the OCAP staff was

listed as having 14 involvements out of a possible 65, these involvements took place almost entirely in the months of November and December and since the beginning of January there are only three reported instances of such involvement. It is possible to draw a conclusion that the severe curtailing of career education activities may in part be related to the lack of OCAP involvement. At least a correlation between these two events is positive and high. The involvement of the school's administration listed at only two involvements of a possible 65 certainly suggests passivity at best. It would be difficult to hypothesize any catalytic force from administration occurred during the entire year.

The implementation model contained certain risks, the loss of OCAP influence, and the assumption of enthusiasm among the chairpersons. There is no question that OCAP did lose influence and contact, only three contacts listed since January 1, 1978. The enthusiasm of the chairpersons was not consistently high or uniform. The number of career education activities varies from 12 to one. The fact that two chairpersons dropped out of the monitoring system in December suggests that their involvement diminished markedly. The infusion process, while logical and seemingly feasible, broke down for many reasons, one of which would be the withdrawal of the OCAP stimulus.

APPENDIX A

KING PHILIP REGIONAL SCHOOL DISTRICT

CAREER ACTIVITY WEEKLY SUMMARY FORM

NAME:_____ DATE:_____ TO:_____

( ) No career activity this week

Indicate frequency of activities for this week.

( ) Instruction (Please fill out teacher's form)

( ) Planning with department members.

( ) Discussions with other faculty.

( ) Discussions with administration.

( ) Discussions with OCAP staff.

Currently my department's implementation plan is:

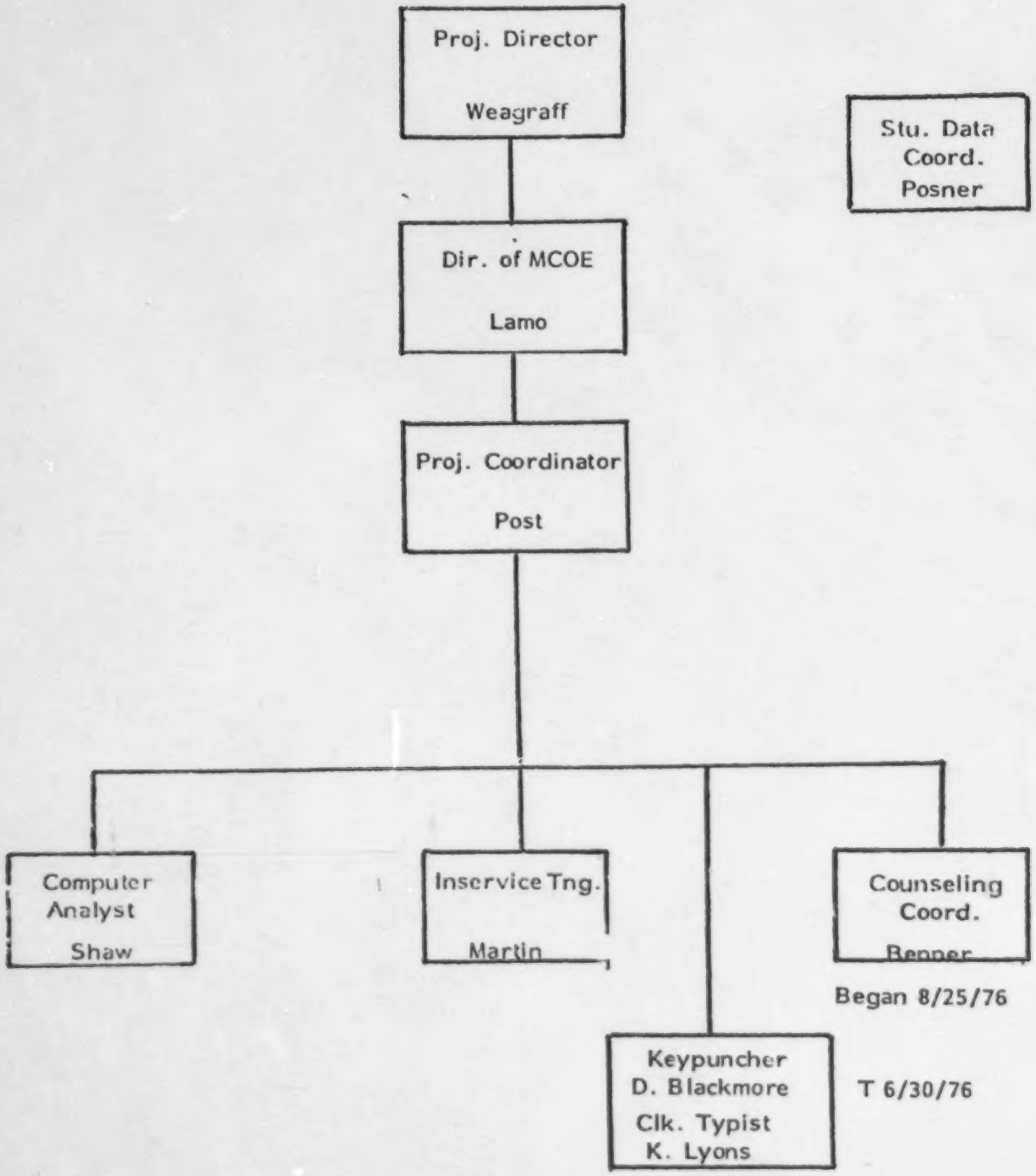
( ) on schedule ( ) behind schedule ( ) ahead of schedul

Comment on any incidents that obstructed you in maintaining your implementation schedule.

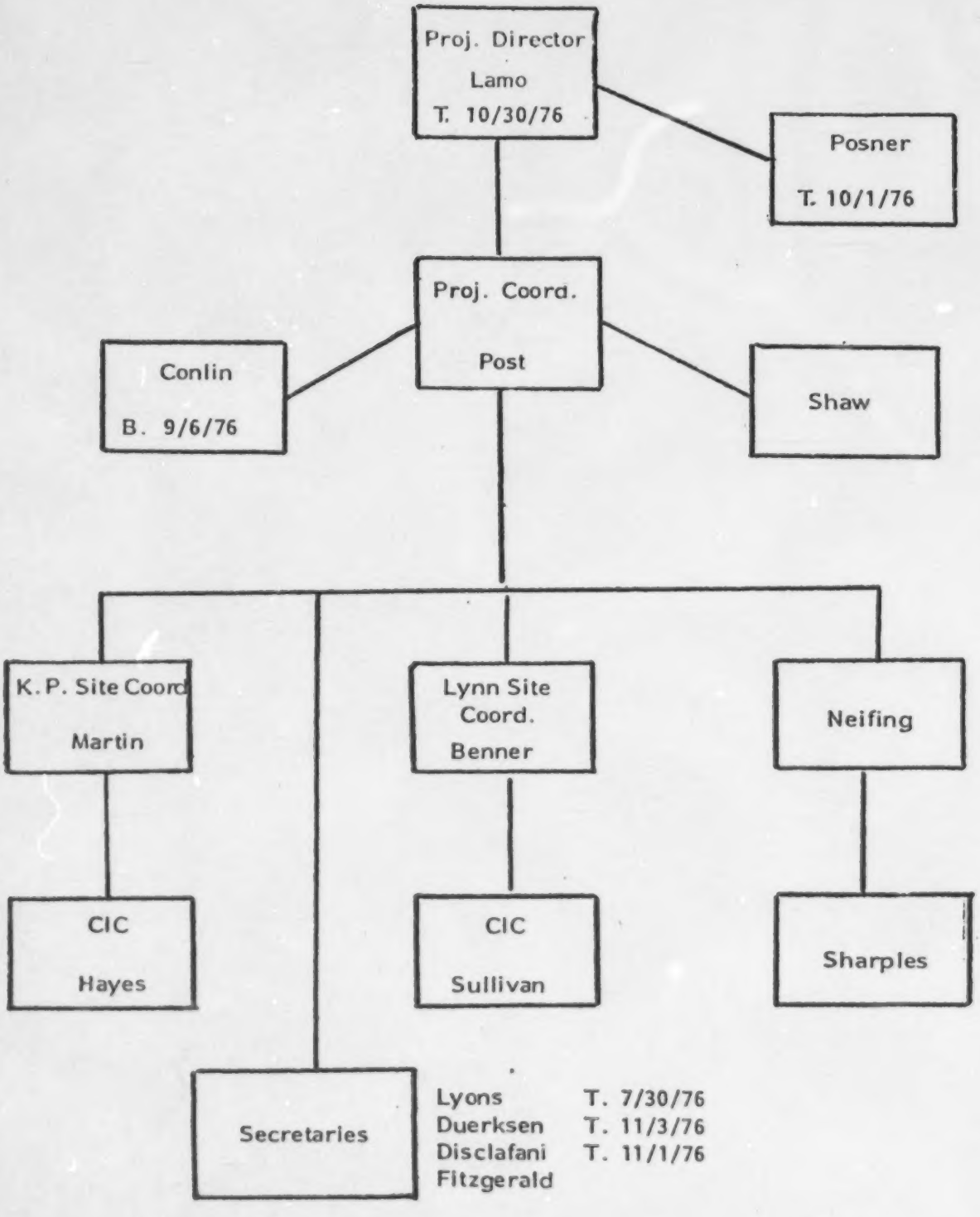
Comment on any incidents that helped you in maintaining your implementation schedule.

g. Staff Employment and Utilization

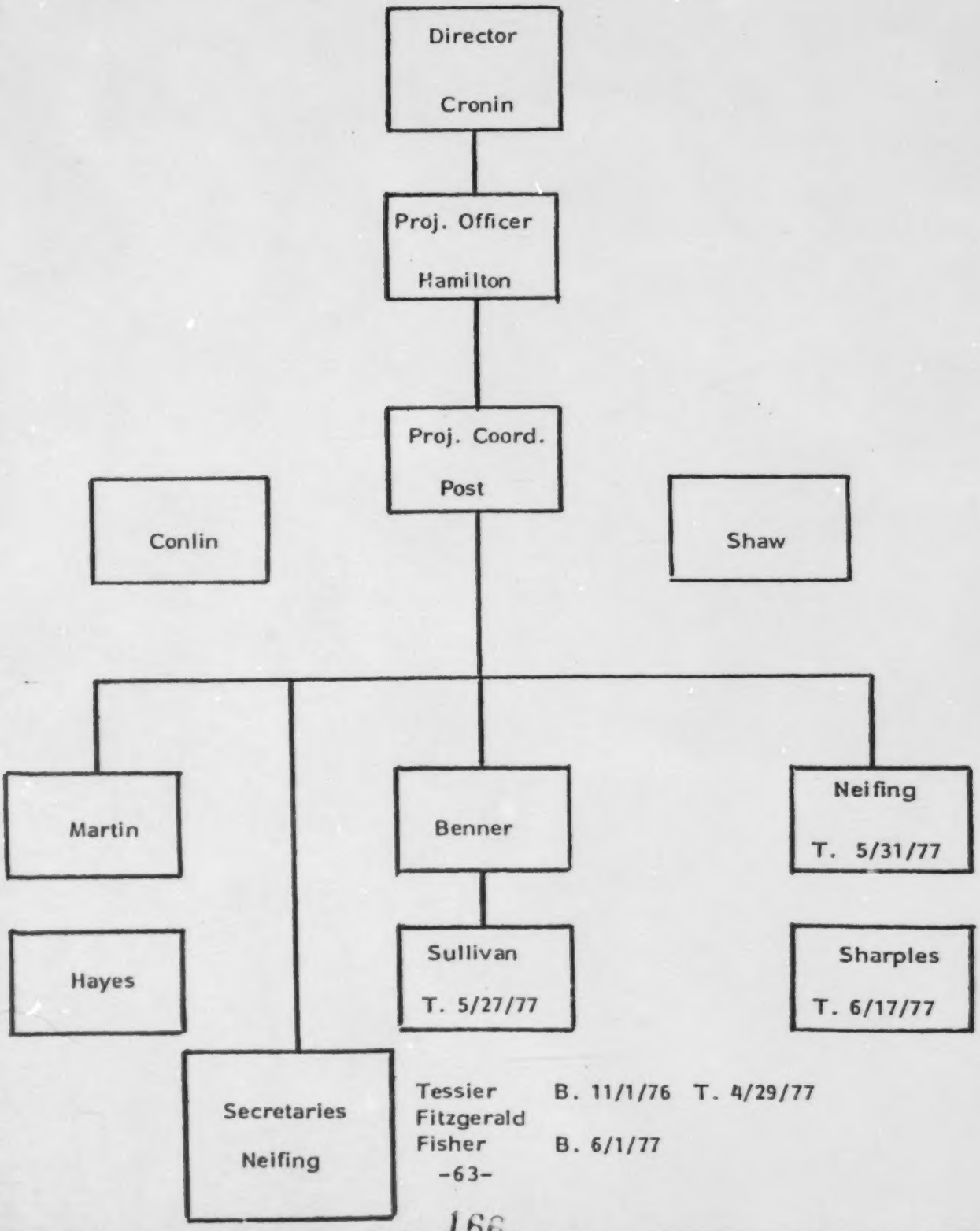
OCAP
ORGANIZATION CHART
Year 1 at MCOE

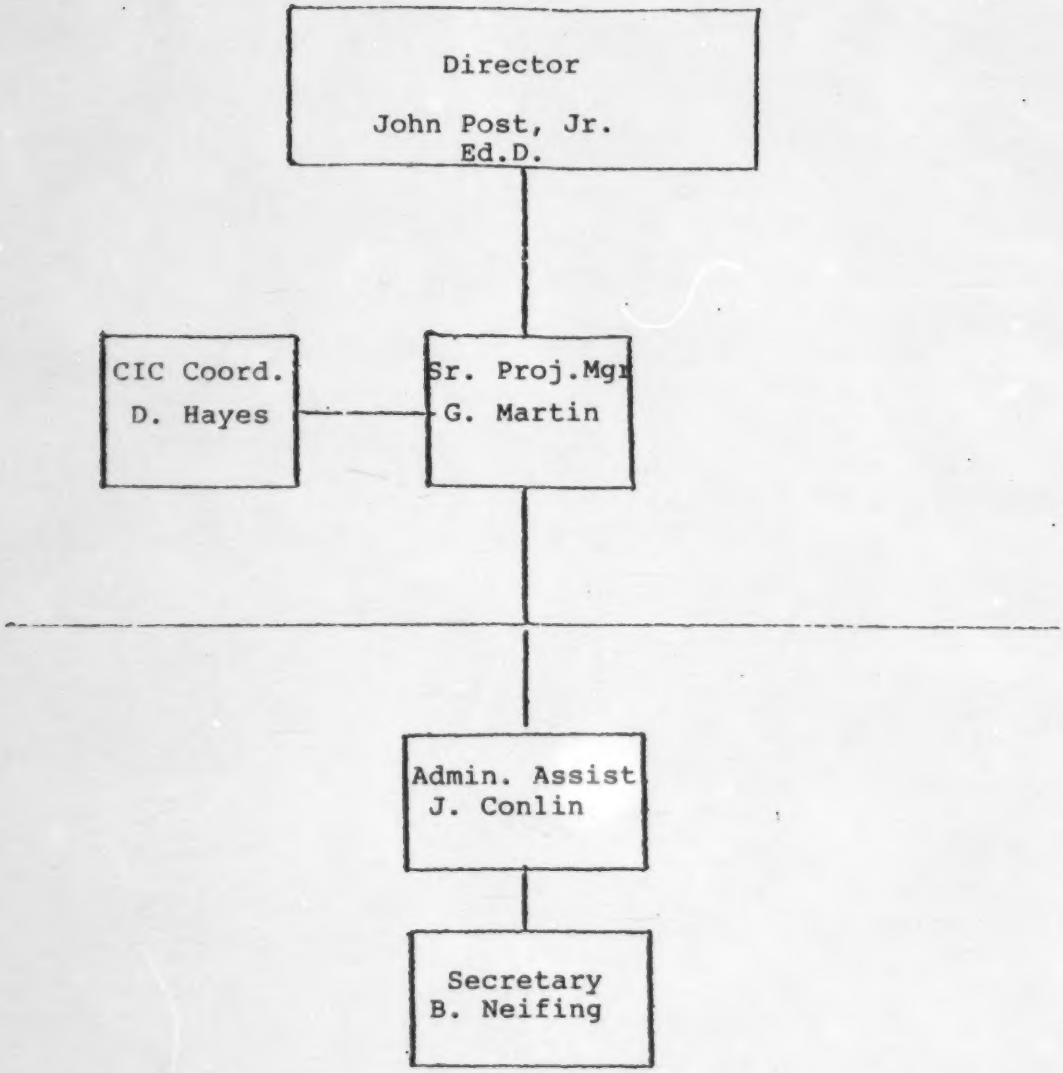


OCAP
ORGANIZATION CHART
Year 2 at MCOE



OCAP
ORGANIZATION CHART
Year 2 at ICR




Director
John Post, Jr.
Ed.D.
CIC Coord.
D. Hayes
Sr. Proj.Mgr
G. Martin
Admin. Assist
J. Conlin
Secretary
B. Neifing

h. Staff Development

Inservice training for project staff included many in-state and out-of-state conferences. The conferences provided valuable information and allowed members to exchange ideas and experiences with people in the field. As a result, project staff members developed career education strategies for both Lynn and the King Philip sites, which were more in tune with current trends in career education. Conferences attended included: Instructional Strategies Curriculum Development, Life/Planning and Career Guidance, etc.

The following is a list of conferences attended by the project staff:

November 1975 - National Symposium on Task Analyses/ Inventories Programs. Sponsored by the Center for Vocational Educaiton, Ohio State University, Columbus, Ohio. Attended by Greg Martin.

November 1975 - Tri-State Conference Part D Projects, Framingham, Massachusetts. Attended by John Post, Richard Benner, Greg Martin, and Jean Conlin.

January 1976 - Naval Vocational/Technical Education and Training Programs Conference, Pensacola, Florida. Attended by John Post.

February 1976 - Futuristics Conference on Occupational Education sponsored by Massachusetts Department of Education (Occupational).

Attended by John Post, Greg Martin, and Richard Benner.

March 1976 - Association for Supervision and Curriculum Development Convention, Miami, Florida. Attended by Greg Martin.

April 1976 - Life/Work Planning Workshop - the National Career Development Project, Monclair State College, New Jersey. Attended by Richard Benner.

April 1976 - Conference on Career Education, Columbus, Ohio. Attended by Richard Benner.

April 1976 - University of Massachusetts, Resource Aide Workshop. Attended by Diane Hayes and Monica Sullivan.

August 1976 - Tri-State Conference, Part D Projects, Sugarbush, Vermont. Attended by John Post, Greg Martin, Richard Benner, Glen Neifing, Tom Harrington, Monica Sullivan, and Louise Sharples.

October 1976 - Training Workshop for the Decision Making Program, Chestnut Hill, Massachusetts. Attended by Richard Benner.

October 1977 - National Symposium for Professionals in Evaluation and Research, Boston, Massachusetts. Attended by John Post.

November 1976- 8th Annual Conference of the International Conference for Individualized Instruction.

Sponsored by the Association for Supervision and Curriculum Development, Chicago, Illinois. Attended by Greg Martin.

November 1976 - National Curriculum Study Institute of the Association for Supervision and Curriculum Development - Practical Applications of Criterion Referenced. Attended by Greg Martin.

November 1976 - Commissioners National Conference on Career Education, Houston, Texas. Attended by John Post.

December 1976 - 70th Annual American Vocational Association Convention, Fort Worth, Texas. Attended by John Post.

January 1977 - Tri-State Conference, Region I, Part D Project Conference, Waterville Valley, New Hampshire. Attended by John Post, Greg Martin, Richard Benner, Louise Sharples, and Glen Neifing.

February 1977 - Part D National Conference: Increasing the Impact of Innovative Projects. Sponsored by the Center for Vocational Education, Ohio State University, Fort Worth, Texas. Attended by John Post.

February 1977 - AASA Convention - American Association of School Administrators, Las Vegas, Nevada. Attended by John Post.

February 1977 - American Vocational Association Convention. Attended by John Post.

February 1977 - National Association for Industry and Educational Cooperation. Attended by John Post.

April 1977 - American Education Research Association META Evaluation Conference. Attended by John Post and Greg Martin, New York City.

April 1977 - National Association for Industry and Educational Cooperation Conference, Washington, D. C. Attended by Richard Benner.

May 1977 - Career Education Workshop on Opportunities for Women at the Prudential Center, Boston, Massachusetts. Attended by Diane Hayes, Monica Sullivan, and Jean Conlin.

June 1977 - Leadership Conference and Workshop sponsored by the State of New Jersey, Division of Vocational Education, Rutgers University, New Jersey. Attended by John Post, Greg Martin, Tom Harrington, and Richard Benner.

July 1977 - Part D Tri-State Conference, North Conway, New Hampshire. Attended by John

Post, Greg Martin, Jean Conlin, and Tom Harrington.

October 1977 - National Symposium for Professionals in Evaluation and Research, Boston, Massachusetts. Attended by John Post.

March 1978 - American Personnel and Guidance Association Workshops, Washington, D. C. Attended by Greg Martin.

April 1978 - Education Evaluation Workshop, Washington, D.C. Attended by Jean Conlin.

May 1978 - The Education Cooperative, Bentley College, Waltham, Massachusetts. Attended by Jean Conlin, Greg Martin, Diane Hayes, and Richard Gauld.

Tri-State Conferences scheduled in November 1975, August 1976, and January 1977, involved project staff members from the Vermont Project (student plans and career clusters) New Hampshire Project and the Massachusetts Project (Occupational Competence Access Project). The staff members were brought together to exchange ideas, activities, and problems in their own projects. Since the three projects were similar, these sessions proved to be most helpful.

Courses and curriculum day workshops were offered to members of the faculty at both sites throughout the three years of the project. The courses and workshops were designed to introduce career education to the faculty members, to identify student needs in their own school, and to assist

in the development of career education activities into their subject areas. Several meetings were also conducted to offer additional assistance when needed.

The following inservice courses were offered:

Inservice Course 850 - This course was offered through Fitchburg State College. Participants received 3 credits upon completion of the course.

The goal of this course was to introduce teachers, counselors, and school administrators to innovative techniques employed in the delivery of career education. These techniques included: introduction of the concept of student career development into the curriculum and the utilization of guidance and career information resources. Course participants developed strategies and materials for implementing career education in their own schools. (See Appendix p.)

Inservice Course 851 - This course was offered through Fitchburg State College for three credits. The goal of this course is to help teachers and counselors complete development of curriculum and guidance strategies for an effective occupational competence program. The participants implemented these strategies with high school students during the school year.

Strategies covered were: occupational decision-making tests, and guidance information systems to support career development, development and use of the school's career resource center, development of career resources for each OCAP classroom, continuous instruction systems, cluster-

based instructional learning activity packages, and methods to relate course content to careers.

Inservice Course 852 - The course was given through Fitchburg State College for three graduate credits.

The goal of this course was to further assist teachers and counselors in the refinement, expansion, and implementation strategies for career exploration activities, evaluating and adapting commercially produced materials, and the concept of the vocational/academic team approach to individualized instruction. (See Appendix p.)

Lynn OCAP Course

This inservice course was held for the Lynn School System only. The course was offered to faculty members of the Junior and Senior High Schools.

The OCAP course offered approaches and resources to participants that helped each person design his/her own role in developing practical activities and realistic plans to help junior and senior high students' self awareness, career awareness and exploration, and deciding/planning/implementing. (See Appendix Q.)

King Philip OCAP Course

The course was given during the summer of 1977, as a one week course designed to assist the science, math, social studies, English and guidance department chairpersons develop a school-wide career education curriculum plan. Common goals were listed while the objectives were specific to each department. Activities were then developed. As a result, a

career education plan was developed involving 9th grade students.

Curriculum Day Workshops

In response to a need for career information at the junior high level, the project staff was involved in a workshop at King Philip Regional School-North, the only junior high school for the system. The workshop discussed the Career Information Centers, the utilization of career information, and career awareness activities for all the students. Each participant received career information and a resource listing relative to their subject area. During the 1977-1978 school year a Career Information Center at the junior high would be in operation.

The second workshop involved both the senior and junior high school faculty. This workshop was presented by Dr. Diane Rudnick, chairperson of the Social Studies and Humanities Department at Wentworth Institute, Boston, Massachusetts. Dr. Rudnick discussed the Effects and Causes of Sex Stereotyping. She cited several examples of sex stereotyping and discussed non-traditional career opportunities. A question and answer period followed the presentation.

Exchange Program

After attending several conferences involving similar projects in Vermont and New Hampshire, the project staff felt that a teachers' exchange program would be most beneficial. The exchange program took place during March 1978. Gary Lombard, English teacher and Alan White, Mathematics teacher from

King Philip were involved. Mr. Lombard and Mr. White were able to exchange ideas and experiences with the members of the Burlington, Vermont Project. They met with the English and Math Department members and visited several classes while they were in session. They were able to develop career education activities for their classes using the information from the Vermont Project.

Paul Fortunato, Media Director and Edward Maloney, Media teacher visited the Sommersworth, New Hampshire project. They spent a great deal of time meeting with Skip Prior, Media Director. The New Hampshire school system has an excellent media program which has been in operation for several years. Mr. Fortunato and Mr. Maloney were given several suggestions to assist in the expansion of the Media Center at King Philip.

Workshop for Career Information Center Aides

At the end of the 1976-1977 school year the Lynn school system was interested in starting career education programs at the junior high level. Aides for the CIC's were hired in May and an intensive one week training session was initiated by the project staff.

The training program began with an orientation to career education and the OCAP program. The aides were advised to start to think about a job description and job goals. The second day the aides discussed organization of resources, ordering free and inexpensive materials for their centers.

The remainder of the week dealt mainly with the center's activities. Activities involving the students, faculty, and the community were included. Aides met with school representatives to discuss budgets for the school year, finalize job descriptions, and job goals. The last day was used to share goals and experiences and to develop operating procedures for the opening of their centers in the fall.

Due to unionization in the Lynn school system, some of the CIC aides were replaced; therefore, another workshop was held. This workshop served a dual purpose; first, to introduce the new CIC aides to career education and career center activities, and second, as a follow-up for the entire school year.

Fifteen workshops were held during the school year. The following topics were discussed:

1. Introduction to the career center.
2. Goal setting.
3. Identifying and assessing resources.
4. Planning and budgeting for CIC activities.
5. Developing roles.
6. Processing and following student progress.

Technical assistance was given throughout the year when aides were involved in classroom activities.

Team Leader Workshop

Team leaders were appointed in each junior high as part of the school-wide career education program.

Workshops were conducted throughout the school year. The team leaders were responsible for the supervision of the career center and the career center aides. They became chairpersons of the building level career education team and liaison between the building team and building principal, deputy superintendent and OCAP.

The team leaders via weekly workshops kept in close contact with the career centers, problems faced by the career center aides, and reactions and suggestions of faculty members from the different schools.

The following topics were discussed:

1. Team leader roles and responsibilities.
2. Managing the Career Information Center activities.
3. Career education team functions.
4. Generating building level interest in career education.
5. Redefining staff roles in career education.
6. Utilizing community resources.
7. Needs assessment in career education planning.
8. Career education models - OCAP, Lynn Plan and others.
9. System-wide coordination of career education.

On March 15, 1977 the OCAP staff sponsored a workshop entitled "Expanding Career Options for Students," for the faculty of the Lynn school system. The workshop was held at the Holiday Inn, Peabody, Massachusetts.

Panel members were:

Dr. Diane Rudnick, Chairperson of the Social Science Department at Wentworth Institute

Barbara Taggart, Owner, Co-Op Auto Repair Garage, Watertown

Pam Williams, Personnel Officer, Essex Bank, Peabody, Massachusetts

Each panel member discussed career opportunities for Lynn students within their own career fields; activities that should be incorporated into the curriculum to assist students in finding a job, and qualifications Lynn employers are looking for in a prospective employee. A question and answer period followed.

i. Conclusions and Recommendations

The Occupational Competence Access Project is a model for establishing career development as an integral part of the total school program. Career development in this project means increased self awareness, greater knowledge of occupations, stronger career decision making, an understanding of the economic world and a set of basic job getting and entry level competencies - all manifested in a student's abilities as a result of this career development aspect of his or her school experience. The approach used to impact on that school experience is an infusion strategy which serves to enhance, rather than supplant curriculum, and addresses every facet of school functioning in such a way as to alter the process of educators going about their business.

The pervasive nature of the OCAP model dictates that a conglomeration of practices such as procedures, policy statements, counselor, teacher, and administrator roles, inservice education, resource management systems, coupled with products such as course materials, student materials and a career information center manual, be viewed as a unified force focused on bringing about desired outcomes. To date this comprehensive innovation has produced new attitudes in vocational and academic teachers in the city school district of Lynn, Massachusetts and the suburban/rural regional district of King Philip in Wrentham, Massachusetts, toward teaching the application of knowledge concurrently with its acquisition and has introduced the critical dimension of helping students develop and make decisions within their respective classrooms. Counselors have developed increased capabilities in acquiring and using career information resources and have developed a role of professional assistance to their colleagues in the classroom. Administrators have led the way toward planning and policy development which supports career development as a part of the fabric of the curriculum. These trends form the context within which our claims of effectiveness are couched.

The specific components of the model can be described as parts of a system interfacing in such a way as to unify and capitalize on a student's experiences and resulting competencies, rather than to compartmentalize students as mass groups along subject matter lines. The hub of this system is the

Career Information Center which contains career information organized by occupational clusters. The Center is more than a repository for information, however, since it also contains student files which serve as benchmarks in their career development. The Career Information Center is also the coordinating unit for professional resources and the community resource management system. These components comprise one underlying strand of the model, namely the systematic utilization and management of resources.

Another component of the OCAP model is the internal operating design or people dimension of the system. This component is evidenced through policy procedures and role statements, which govern how school personnel go about the business of career development as an integral part of the educational process. Additionally, software has been produced to create the blueprint for student experience within the model. It is here that a systematic guidance product (Careers and Me) and a variety of teacher instructional materials have been developed or adapted to facilitate career development activities. The materials are objective based and designed to fit within the curriculum, not be taught in addition to the curriculum, and deal with the application of knowledge, understanding of relationships between work and education, self awareness, career awareness, and decision making.

The final component of the model is a support system which initiates, monitors, and guides the other two components. Activities within the support system include the

development and implementation of systematic procedures which back up the resource utilization and management component. Inservice activities conducted on an ongoing basis, working toward defining roles, facilitating operation and generally creating a school environment conducive to career development, underlie the internal operating design. Workshops, curriculum days, and departmental curriculum revision support the development and utilization of software in the model.

These components and subsystems operate in an interactive mode, which consistently reinforces a student's career development and bring to bear the necessary available resources and extant educators playing new helping roles rather than dispensing knowledge. The student is exposed to an educational system which responds, rather than dictates, to his/her needs. The keys to the system are comprehensiveness, in terms of the model addressing all aspects and levels of the school system and simplicity, in terms of the roles, processes and costs involved in establishing the model.

The Occupational Competence Access Project has been a successful demonstration of the impact of current vocational education practices in two different school systems. Implementation of the OCAP model has yielded several promising implications for other schools. The project management design also holds implications. Finally, the issues and problems faced in the project render implications for others. Therefore, the implications and recommendations are presented in sections addressing these three areas.

The OCAP Model

This project has emerged as an operational model, which could be useful in schools implementing careers and/or comprehensive vocational education. The model is graphically depicted in Figure 1 on page 3 of this report, and is characterized in the preceding pages of this section. It is a comprehensive approach based on the practice of new roles for guidance counselors, teachers, and administrators. The process underlying this model requires interaction between school and community toward the goal of responding to student needs.

The model has proven to have considerable potential as a method of increasing occupational awareness in students and providing a career dimension to the school curriculum. Many schools are interested in these goals, and should consider the OCAP model as a vehicle to produce desired outcomes.

The project has created a new emphasis relative to a cluster-based approach to occupational education. Clustering heretofor was considered as a classification methodology for world of work content. In OCAP, clustering has become a process orientation, which has led students through a path of discovery of their needs, interests, and motives in a context of how they might fit into the working world. The cluster format has provided and organized a body of information, which, as a result of the OCAP process, has enhanced the systematic search, which is part of each students career development. This systematic implementation of career development

is an important aspect, which could be replicated in other sites.

Perhaps the greatest set of implications emanating from OCAP are focused on guidance. There has been the introduction of an efficient and effective method of delivering career information to students. There have been role changes, which enhance the counselor's ability to help students, not only in the guidance office, but in the classroom, and in the community. Counselors have adopted methods of group counseling, teaming with professionals and paraprofessionals, and drawing on community resources for the improvement of students' career development. These practices have made counselors more effective and have increased the relevance of the guidance departments in the schools.

The project has also addressed competency based instructional practices with teachers of academic as well as vocational subjects. These teachers have successfully incorporated an occupational dimension with the content they traditionally taught. This has led to more interesting and relevant curriculum, and has introduced the application of competencies that students learn. Much needs to be done in this area. Some of the products and procedures developed in OCAP will be useful resources for others attempting to develop curriculum.

The methods used in organizing and utilizing community resources in this project should be of particular interest to many educators faced with the problem of conducting ongoing

community liaisons. The strengths of the OCAP community resources approach lies in the systematic management of resources, which have a potential for impact on the school. There is also a self renewal dimension to the process, which will help educators sustain the resource utilization over long periods of time. The community resource management system is particularly important in larger, more complex school systems since it enables the district to reduce overlap, identify and use sources, and maximize to community potential.

Project Management Design

This project is somewhat unique among UEA Part D projects in that it was conducted by an external agent to the school sites in which the demonstrations took place. Conducting a project in this manner holds good potential for implementing innovations on a very cost effective basis, and eliminates many of the assumptions costs associated with conducting an internally directed project. There are several considerations one must make which yield many benefits from the application of an external change agent model.

First the project staff must realize that change will occur as a result of influence on the school system rather than direct control on their part. Therefore, the process dictates a thorough understanding of the people and organizational structure of the site if they are to successfully influence decision makers.

The external project staff has greater latitude, and opportunity to interface with all levels of the school staff than their counterparts who are running the project from inside the structure. In order to enhance this communication the project staff were assigned different areas of responsibility in guidance, instruction, and administration. This led to school administrators being clear on the components of the project, and provided each staff member with a cause to maintain communication with the school personnel. As the project progressed, and liaisons were developed, the responsibilities of the staff changed to assignment of responsibility for the entire school site. The shift enhanced the project management because each site was developing in a different manner. The flexibility exhibited here is one of the positive aspects of the independent external change agent model.

A very necessary ingredient in the change process is the development of a tangible success model early in the project. In this case the Career Information Center established a central place to demonstrate, on a small scale, that results could be accomplished through the project staff and site staff working cooperatively. It provided a certain amount of creditability for the project in the eyes of the administrators, and provided a vehicle to establish working relationships and roles among those working on the project.

The project staff, at this point, had to identify motivational factors, which would influence various target audiences who would be expected to develop and adopt the project

components. The project objectives were written at an operational level for each year. This insured the communication of our intentions to the school personnel, and gave them points of tangency with the project goals and their motives. The objectives are also useful in measuring the progress that the project is making.

Using an external project management design the school system could take advantage of the staff expertise on an ad hoc basis rather than attempting to conduct the project with existing staff or adding staff, which would become part of the financial burden at the end of the project. This has worked out to the benefit of the school sites that OCAP operated in, and could be a viable design for other projects.

Issues and Problems

As a result of our experience in OCAP there are a number of suggestions, which can be made to other educators conducting similar projects coming from the issues and problems faced in the past three years. One of these is the resistance to change manifested by school personnel. If the project staff is not prepared to deal with this resistance, and accept it as a human condition, there becomes a problem with staff morale. If, however, one realizes that this resistance is a natural occurance and devises ways to combat that anticipated resistance, a more positive environment will exist.

Operating a demonstration model in the school environment exposes the staff to competing influence variables such as teacher strikes, administrative transition, austerity, and

political influence. These are often deterrents to the project's progress, and in most cases out of the control of the project staff. Dealing with these variables leads to frustration if the staff is not skilled in problem solving and/or if they are unable to predict the intervention. In OCAP several of these types of variables existed from time to time. The staff developed abilities to create alternative solutions and minimize the negative influence these situations presented. Moreover, the staff got to a point where some of the competing influences were used to further project objectives as a result of defining project aims in terms of existing thrusts being taken in the school systems.

OCAP has been conducted using an infusion approach to curriculum. This approach is preferable since it enhances the existing curriculum, however, it appears to take a longer period of time to completely penetrate the curriculum than is normally funded under federal grants. Therefore, the issue is raised of changing the grant policy for demonstration projects toward four or five, or more years, commitment rather than funding the more intensified three year grant. This type of change would be conducive to a greater potential for success since it appears that the process of adopting innovations requires several years to take place.

Finally the problem of transferring ownership in a project such as this must be examined. The project staff gets deeply involved in a project during the first two years of operation. They must divest themselves in the third year if

the school system is to carry on the project in the future. The expectations of the project staff members are generally quite high relative to the school staff assuming ownership in "their" project. One should recognize this to be a potential problem area, and include discussions with the school staff relative to an orderly transition of project management. Realistic maintenance roles must be designed, and assumed by the school personnel during the life of the project so that the initiators (project staff) are no longer needed by the time the funding period ends.

OCAP has accomplished a large number of creditable changes in its three year history. These are described in the components and appendices of this report. The benefits of OCAP are transferable to many other school systems since it has been conducted in typical school environments. It is the intention of this report to have organized this information so that it will assist other educators in multiplying the benefits of occupational education.